

12
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THE ECONOMIC REVIVAL OF ITALY

UNIONE TIPOGRAFICO-EDITRICE TORINESE

(già Ditta POMBA)

TORINO - Milano - Napoli - Palermo - Roma



THE ECONOMIC REVIVAL
OF ITALY

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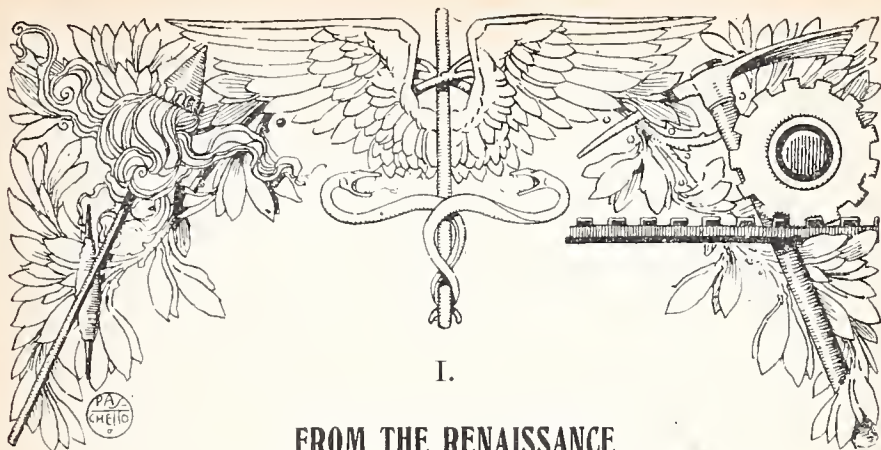
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FROM THE RENAISSANCE TO THE "RISORGIMENTO,,

The old supremacy.

Vincenzo Gioberti, the apostle and pure evangelist of the Italian « Risorgimento », wrote a celebrated work before the revolutions of 1848 with a view to demonstrating the « moral and civil supremacy of the Italians ». Words which, to some among the more temperate interpreters of the patriotic abbé's thought, may have seemed to betray an inordinate national pride: but which, together with other expressions inspired by a desire to incite, served the purpose of spurring on the country to its great struggles.

Historically, Gioberti's phrase does not cover the whole ground. As a matter of fact, the « moral and civil supremacy », which the Italians had derived from the past as the firstborn of the Empire and of the Church of Rome, became, in nearer times, an economic supremacy as well.

In the time when the art of painting was giving its first signs of life in Florence with Cimabue and Giotto; when Dante, like a sun rising without any preliminary twilight on a dark landscape, suddenly illumined Italy and Europe with a new

literature; while the researches of learned men in Bologna were being prosecuted with fervour over old Latin law texts, our seafaring Republics of Pisa, Genoa and Venice had already conquered the dominion of the sea for some time past to the extent that the trade of the medioeval world was centred in their hands.

Fair ages when at night
The bell of Saint Mark
Signalled to their cities
The return of their ships:
From Egypt, from the Tanas
And from Scandinavian gulfs,
A thousand ships would come
That Adria will see no more.

Thus the Venetian poet, James Zanella, celebrated the past splendours of Venice.

The City of the Lagoons, which flowered at the first dawn of modern civilisation, enjoyed a position similar to that of England to-day. In possession of a large mercantile fleet, firmly strengthened by a military fleet, she scourged the Mediterranean as absolute mistress, dislodging and defeating pirates of every race. Besides her extensive possessions on land, she had her colonies and her landing-places along all the Levantine shores, and of these she took advantage to promote ever more profitable contacts between East and West. Crusaders would entrust themselves to her at the moment of embarking for the Holy Land; the whole of the new traffic that was seeking an outlet towards the western world from Asia Minor, Syria, Mesopotamia, Persia and China, was headed towards her, as to Genoa and Pisa, as also the inventions and conceptions of the East that were destined to create a new thrill of life as well as deep upheavals in the thought and civilisation of old Europe.

Nor did fortune limit its favours to Venice and her rivals on the Tyrrhanean coast. The period known as the Renaissance — which extended in Italy from the middle of the thirteenth to the middle of the sixteenth centuries — was a

period not only of literary and artistic efflorescence, but of economic prosperity. Art itself meant, in Florence, excelling in the *arts*, that is in the industries of that time; and every artisan considered himself something of an artist.

Lombards and Tuscans carried on their traffic in France and England, giving credit to the powerful potentates of those countries. The traces of Italian origin which have survived in banking and commercial terms are known to all, as are those which are still to be found in the technical dictionary of naval terms. The child once grown to manhood never forgets and continues to use the first words he learned at his mother's knee. In the same way banking, trade and navigation, though called upon by the natural course of events to develop and expand under other skies, will never lose the memory of their true country of origin, which is Italy.

That glad return of the peninsula to prosperity after the darkness and squalor of the Middle Ages, also suggested to several learned Italians the first pleasing conceptions of economic science. Bernard Davanzati, among others, wrote in the sixteenth century a *Notice on Exchanges*, in which the phenomena relative to the monetary disturbances between different countries were gone into, with an analytical acumen still worthy of assent and admiration.

Austrian exploitation of Lombardy and Venetia.

Some among the more superficial writers on the economic vicissitudes of our country have seen fit to attribute the present prosperity of Lombardy and of Italy to the past measures of the Austrian dominion. All objective researches, however, based on documentary evidence regarding the essence and the effects of the economic policy that the Hapsburg dominion exercised in Lombardy and Venetia, point precisely to the contrary.

Austria compressed and demoralised and neither encouraged nor revived the spontaneous economic energies of her

Italian possessions. Pressed by the doubt that the plain of the Po, a region marked out for prosperity by nature itself, might successfully rival German districts, and return to the old commercial predominance in central Europe, she raised innumerable customs barriers between the State of Milan and the Tyrol, thus favouring German penetration into Italy and opposing on the other hand the free passage of Italian manufactured articles to transalpine markets. Austria multiplied taxes, internal excise duties, vexations of all kinds, and when it happened, as in the reign of the Emperor Joseph II, who was a thoughtless dispenser of highly superficial reforms, that she appeared to grant singular facilities to some of the great industries, these were simply transformed into privileges granted to a few individuals who enjoyed their sovereign's favour. The great privileged industries created an illusory and ruinous situation, because they found themselves, like the small industries of one time, in the impossibility of disposing of their products beyond the Alps. It was only a ray of light that dazzled the unexperienced, followed by even greater darkness.

Sufficient be it to remind all who dare maintain that Austrian dominion ever benefited the economic development of Lombardy, how at the end of the nineteenth century, the population of Milan amounted to about 128.000 souls, whereas it numbered 350.000 at the end of the sixteenth.

Except for a slight stirring of hope towards 1770, the picture of Lombard economy under Austria was of the most depressing. Scarce labour, meagre industrial budgets, unemployed workmen, growing poverty, all added to a deep regret for the free and prosperous past.

It is not to be wondered at if that population, morally and economically dejected, should have turned their exasperated souls towards a radical change of regime and opened their hearts wider to the ideals of freedom and national unity.

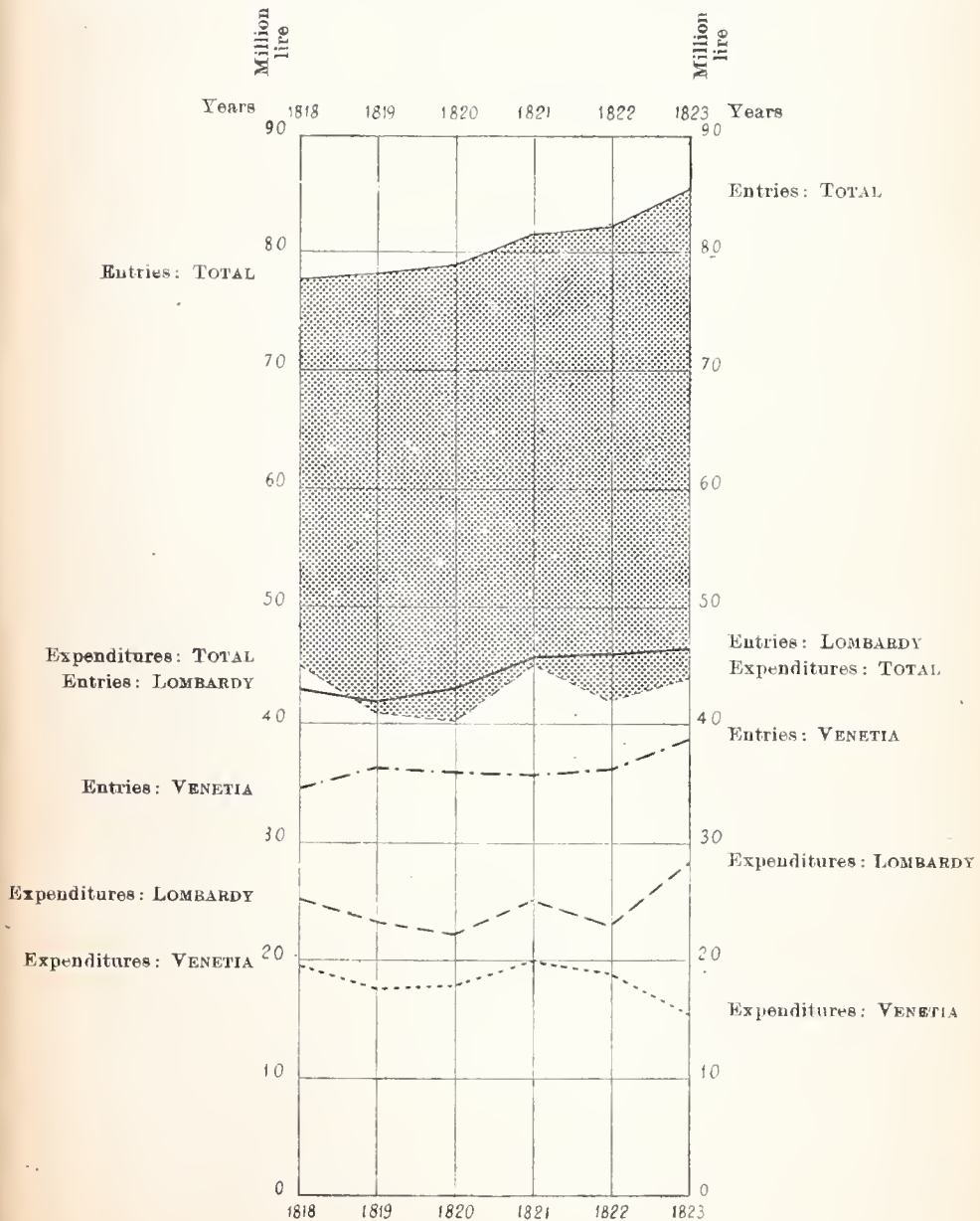
But the most convincing proof that Austrian domination, even after 1815, expressed itself in an odious and avaricious economic exploitation of its subject populations is exposed

TABLE I.

The Austrian Budgets of the Kingdom of Lombardy and Venetia.



Entity of the Austrian robberies (sums taken away from the Italian possessions).



by the figures given in the budget of the Kingdom of Lombardy and Venetia.

It transpires, for instance, from the estimates for the year 1820 that while Austria was extracting from Lombardy, in taxes and other sources of revenue, a sum of 43.000.000 lire, and 36.000.000 from Venetia, she was only spending 22.000.000 in Lombardy and 17.000.000 in Venetia, thus robbing these two provinces of 40.000.000 lire, or rather more than 50 per cent of the entries collected!

Such was the financial treatment inflicted by a restored Austria on the richest and most industrious Italian provinces. Nor was the economic treatment any better. The policy of Metternich imposed on Lombardy and Venetia as on other Italian States, directly or indirectly subject to Hapsburg rule, the so called *prohibitive system*, which consisted in a forest of internal and external customs barriers obstructing entry, exit and transit; in a complex mass of extremely high duties and absurd prohibitions which depressed all industries, intimidated trade and discouraged any beneficial initiative.

Economic irredentism.

As a matter of fact, the cracked-up Austrian bureaucracy even after the defeats of 1859 and 1866, even after its exclusion from the plain of the Po, continued to inflict damage on the unredeemed provinces.

Without speaking of Trieste, which owes the flourishing condition it had reached in 1914 solely to its magnificent maritime position and to the extraordinary activity of its inhabitants, so that its economic development enabled it to make giant strides notwithstanding the suspicion and envy of its masters, it is not difficult to enumerate the economic damage for which the Hapsburg domination is responsible in the Trentino. After 1866, the glass factories were closed in this region, the principal iron works failed, the silk industry found itself condemned to slow but sure ruin. The *bacinelle*

employed in silk spinning were reduced in the space of thirty years from 5000 to about 1500; the factories working to capacity, from over a hundred to eleven. Silk twining, which in the Trentino still occupied 1400 workmen in 1870, had disappeared twenty years later. These are the benefits with which Austria repaid the moral and political humiliation of a province that remained under her rule!

All this goes to demonstrate, were such demonstration needed, that Italy owes to none other than herself the notable economic progress which she has attained. As in the latter end of the Middle Ages, she has seen her production increase, and her economic welfare expand through independence and liberty. Nothing but hatred is due to the oppressor for the old and recent harm done to us. We must needs recognise in the history of our past the traces of a selfish and savage exploitation of which we have been the victims and which is not yet wholly avenged.

The childish legend by which certain economic advantages have compensated the political and moral oppression of our country can only appear to us in the light of a pitiless sarcasm.

Indications of new wealth.

From the constitution of the Kingdom of Italy to the present time, indications of wealth and welfare meet us in comforting progression.

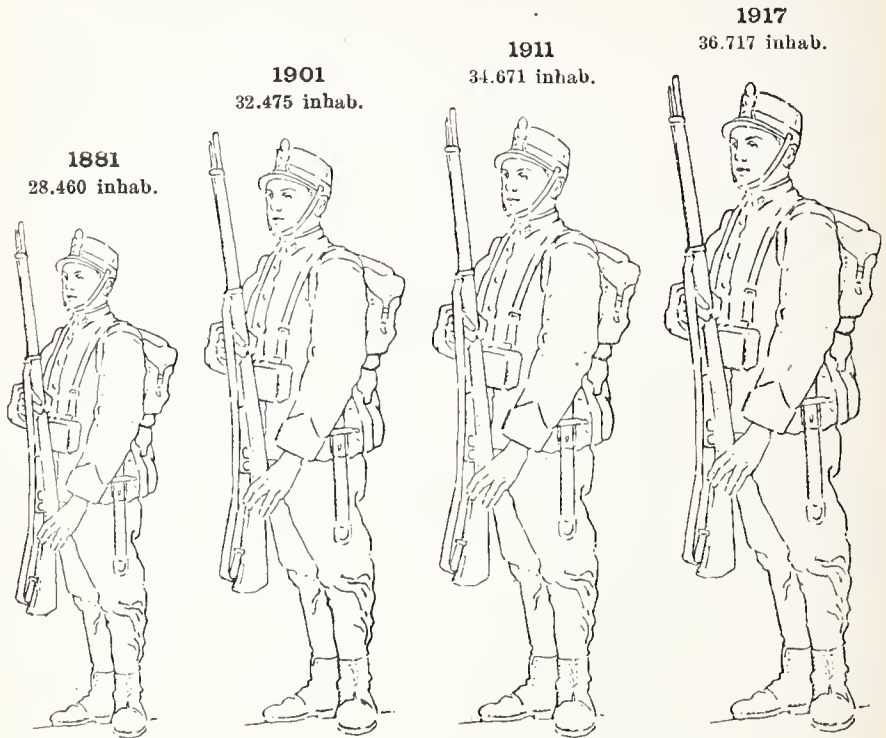
The population of Italy, which counted 25.000.000 of inhabitants on the 1st of January 1862, rose to 26.801.154 on the 1st of January 1872; 28.459.628 on the 1st of January 1882; 32.475.253 on February 10th 1901; 34.671.377 on June 10th 1911 and 36.716.522 on January 1st 1917.

The average production of corn, which was under 33.000.000 quintals per annum in the five years between 1884 and 1888, reached a total of 50.000.000 quintals per annum in the five years between 1911 and 1915.

The production of wine, reckoned at an average of 30.000.000 hectolitres per annum between 1884 and 1888, surpassed

Increase in the population of the Kingdom.

(Thousand inhabitants).



42.000.000 hectolitres between 1910 and 1914. The iron mines yielded 203.000 tons of ore in 1883 and 603.000 in 1913; the foundries produced 27.000 tons of cast iron in 1881 and 426.000 on 1913, while the output of steel rose from 3630 tons to 846.000 tons in the course of the same period. Agriculture and mines, manufactures and commerce increased in prosperity simultaneously.

In the field of chemical products, prodigious increment has been given to the production of sulphuric acid, extracted from national pyrites: 59.000 tons in 1893, 644.000 in 1913. Beer has risen in 33 years (1881-1914) from 127.000 to 652.000 hectolitres; sugar, in the same period, from 635 to 3.000.000 quintals. Among textile industries the silk industry has

preserved its privilege of European supremacy both as to manufacture and commerce, growing from 4.070.000 kilos of raw silk produced in the season of 1892 to 5.207.000 kilos produced in the season of 1912. Even more powerful rivals of the silk merchants, who have given lustre to Italian trade from olden days, the cotton manufacturers sprang up, full of strength and enterprise. Before 1881, the cotton manufacturers had only imported 485.000 quintals of raw material for their factories; they imported four times that amount (over 2.000.000 quintals) in 1913.

Traffic, shipping, credit and saving have developed no less than the industries. In 1888 the total sum of imports touched 1.175.000.000 lire, and the exports 892.000.000 lire; in 1913 both had increased to three times that amount, reaching respectively 3.646.000.000 and 2.512.000.000 lire. The shipping passed from a tonnage of 32.000.000 in 1881 to 113.000.000 sailing from and entering the ports of the Kingdom in 1913. On that first date the length of the railways measured 8818 kilometers, transporting 34.000.000 passengers; on the second, we have a length of 17.649 kilometers, serving 94.000.000 passengers. Still more rapid is the development of the telegraph service: from 26.000 kilometers of lines and 6.000.000 telegrams to 53.000 kilometers and 20.000.000 messages. Still more astonishing is the growth of the telephone, risen from 900 subscribers in 1881 to 89.000 in 1913.

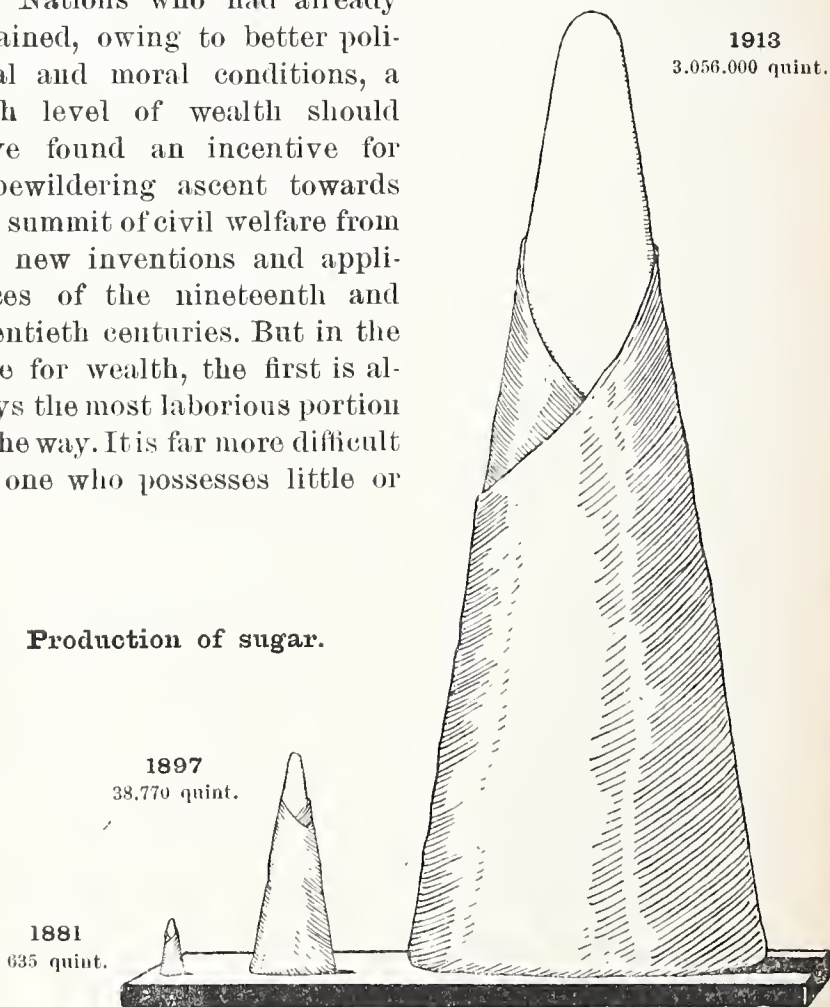
The increase in national saving is also a reassuring moral symptom as well as an indication of welfare. It amounted at the end of 1881 to 979.000.000 lire, and to 5.796.000.000 lire according to the registration of the 31st December 1913.

Before closing this brief summary which gives a synthesis of the magnificent progress realised by Italy in half a century of national life, let us cast a glance at the finances of the State, which were registered at 1.421.000.000 lire of effective entries in the financial year 1884-1885, with an actual expenditure of 1.504.000.000, while the entries were already 2.524.000.000 lire to a disbursement of 2.738.000.000 in the year 1913-1914.

An objection might arise in opposition to the clear language of these statistics: the progress of Italy, it might be argued, is the same progress as that of all other civilised Nations during the period in which mechanical applications and new technical inventions were being everywhere multiplied. It is, as a matter of fact, far more modest than the progress realised by other European and American countries in the same space of fifty years.

Such an objection is easily answered. Small wonder that the Nations who had already attained, owing to better political and moral conditions, a high level of wealth should have found an incentive for a bewildering ascent towards the summit of civil welfare from the new inventions and appliances of the nineteenth and twentieth centuries. But in the race for wealth, the first is always the most laborious portion of the way. It is far more difficult for one who possesses little or

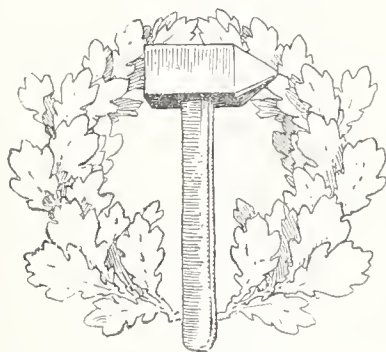
Production of sugar.

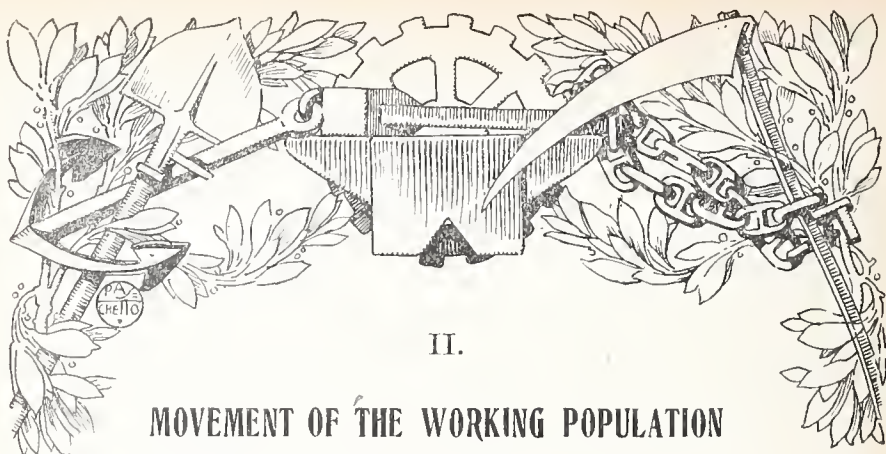


nothing to earn or save a hundred thousand lire, than for he who already possesses a million lire to realise and accumulate several millions.

Italy has had to move her first steps along a path still strewn with all the thorns shed by the Hapsburg and Bourbon domination. She has had to improvise everything while possessing nothing.

After the manner of a willing workman who has risen in virtue of his personal merit, she is essentially self-made. But the results already achieved must henceforth be looked upon as unfailing guarantees of a flourishing and prosperous future.





II.

MOVEMENT OF THE WORKING POPULATION

Birth rate, death rate and emigration.

One of the most powerful levers of our economic revival is the expansive energy of the population.

Year by year, the number of births has surpassed the number of deaths, thus securing a large margin of increase. The registration records of 1913 — the last year of peace in Europe — showed a total of 1.122.482 births as against 663.966 deaths. The proportion of births at that date was therefore 31,7 per thousand inhabitants, while the proportion of deaths, which still reached 27,6 per thousand in 1881, had decreased in 1913 to 18,7 per thousand. The actual working difference amounts to 13 per thousand, as compared to 10,5 per thousand twenty-five years ago.

At the outbreak of the world conflagration, the increase in the population of the Kingdom would have progressed at the considerably rapid rate of nearly half a million citizens per annum, if part of this same increase had not overflowed beyond sea and mountain and contributed with the asset of an abundant and valuable force of labour to the economic development of the whole world.

TABLE II.

INCREASE (OR DECREASE) IN POPULATION

Yearly arithmetical increase per 1000 inhabitants (or decrease) from the 1901 census to that of 1911.

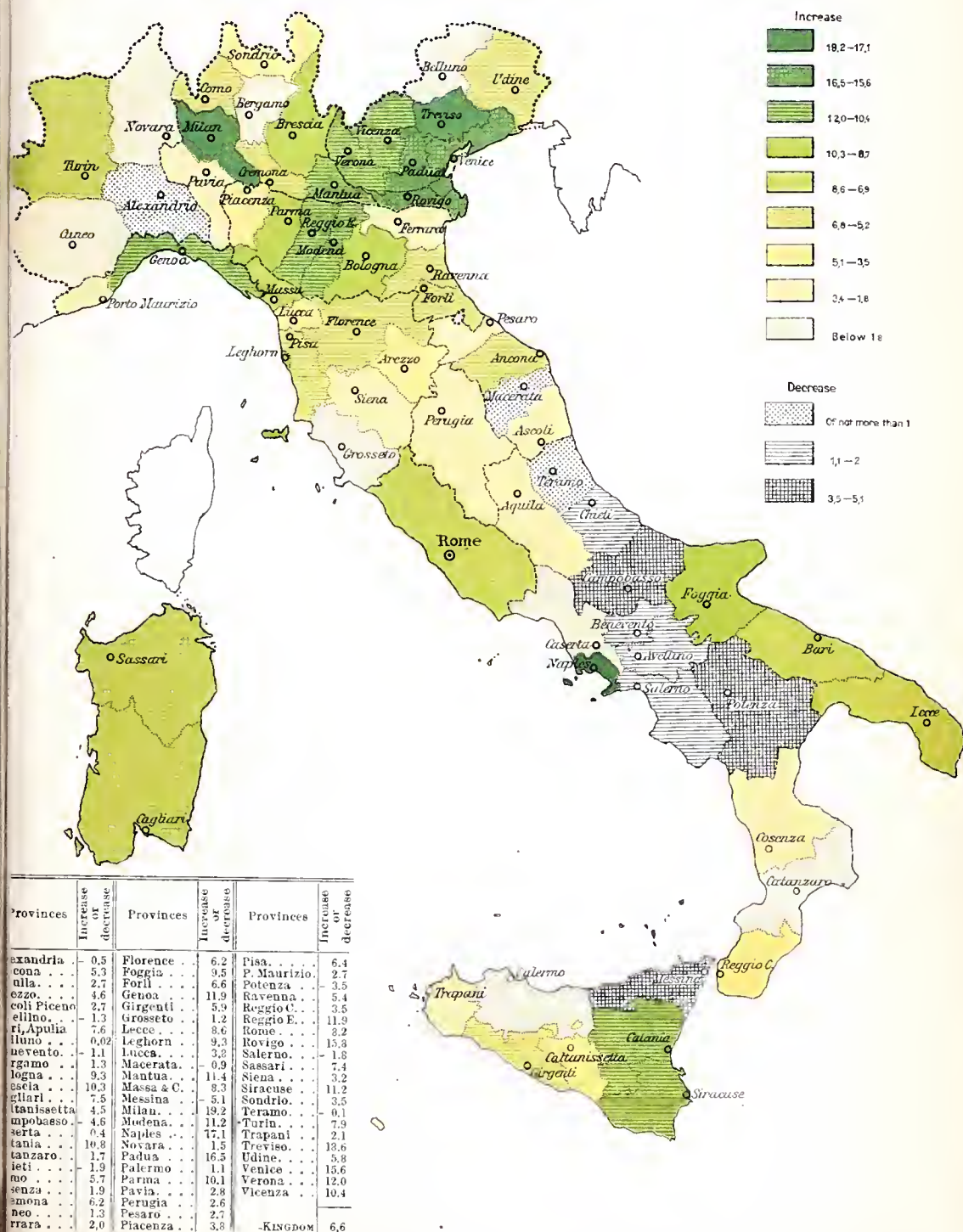


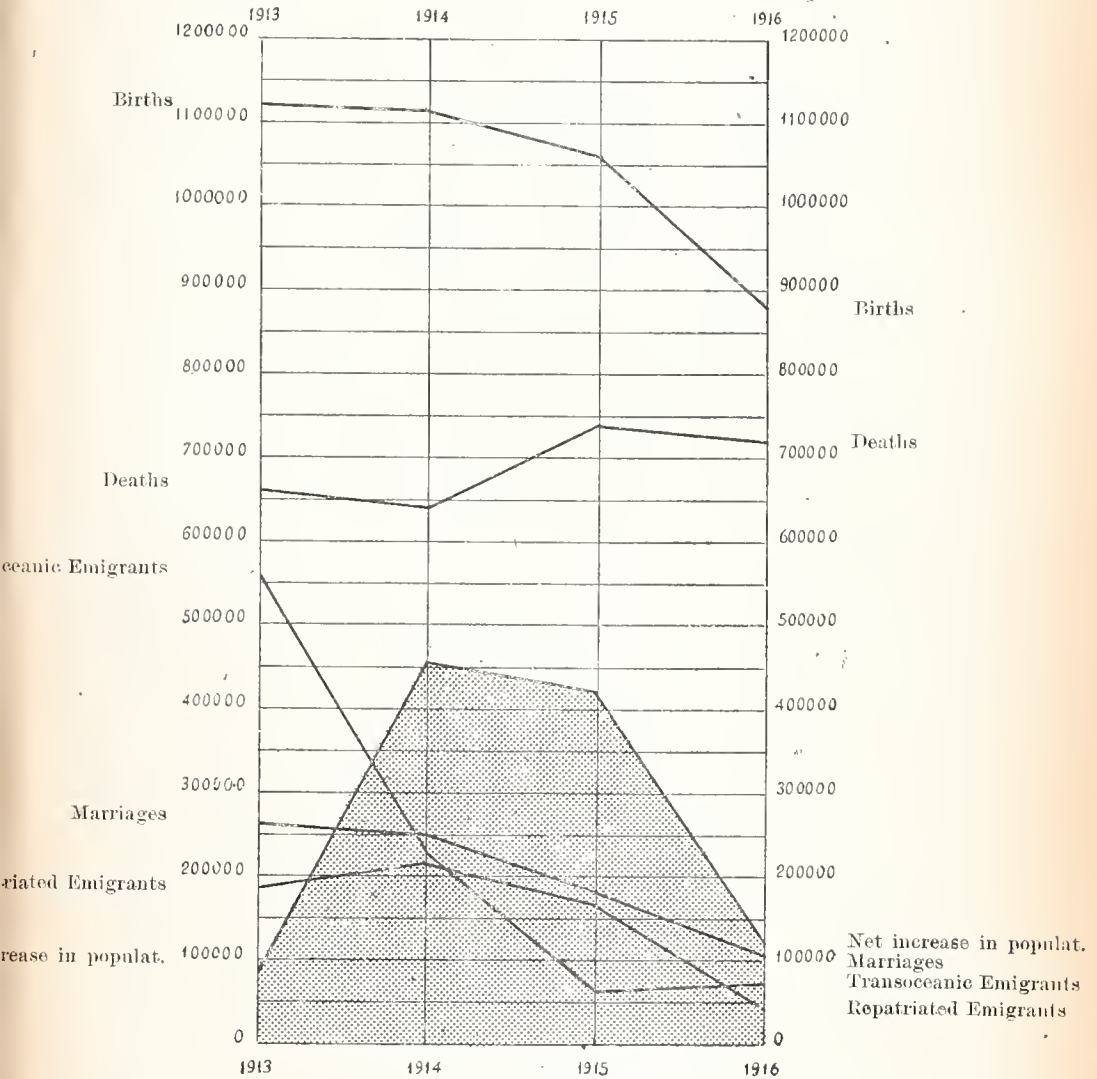


TABLE III.

Increase in the population of the Kingdom during the war.



Total increment of the population in the four years between 1913 and 1916.



From one ten years' interval to another and from season to season, Italian emigration has been on the increase, divided as it was into two principal currents: one towards the central and western countries of Europe, and the other beyond the Atlantic, in North and South America. These emigrants, who were barely 135.832 in 1881, had become 872.598 in 1913, of which 313.032 were scattered throughout Europe and other countries round the basin of the Mediterranean (nearly all with the intention of returning to their native country), and 559.566 in transoceanic countries, of which barely 35 or 40 per cent with any probability of return.

Like the old Roman colonists, like the Venetian and Ligurian navigators, these sons of renascent Italy, « flower of all the races, aroma of the whole earth », have scattered themselves everywhere, leaving traces of their untiring activity everywhere behind them.

The Italian working man, who has always been present at the roll-call of the most colossal constructions in the world, has bent his back under every sky, has mingled his sweat with the earth of both hemispheres. As a labourer, he has dug, sown and reaped; as a road maker, he has drained marshes, filled up precipices and levelled mountains; as a working man and stone mason, he has built palaces and cities, roads and railways, dug out irrigation and navigation canals; as a miner, he has drawn its richest treasures from the earth, has joined up seas, divided lands, pierced and blown up mountains; he has been the heroic vanguard of the most spectacular enterprises, the assailing militia in the epic wars of man against natural elements.

The old dispute as to whether emigration be a good or an evil thing, is ablaze once more in our country in view of the immediate future. But recognition of the fact that the 500.000.000 lire of yearly savings which the emigrants poured back into the national coffers could and ought to be gradually replaced by an equal or greater sum derived from national production and export, cannot relieve us from admitting the great benefits derived from Italian labour, during

the twenty years preceding the war, by European and American industries. These Italian working men are sober, disciplined, assiduous; inured to hard work and the wear and tear of climatic conditions; they have everywhere found employers ready to receive them and apply them to any new initiative. In New York as in Frankfort, in Marseilles as in Buenos Aires, contractors have ceaselessly looked to them, competing for them among themselves: a sure sign that their contribution was keenly appreciated.

Increase in population during the war.

Italian emigration, however, besides being a source of great help to foreign countries, has meant a magnificent reserve for Italy herself. This was evident at the outbreak of war, when it was found possible to concentrate the energies of our people, which the Nation had dispensed with thoughtless prodigality over one and the other Continent, in one supreme effort of war in order to realise the high aims of the Nation and of civilisation itself.

All the sobriety, resistance, tenacity and industry of the emigrant were transfused in the soldier; the numberless docile flocks of a thousand shepherds came to array themselves under a single ideal, under the shadow of their country's flag.

And while other less prolific Nations than ours have witnessed the dwindling of their human patrimony, recording a shortage at the end of each year of war which cannot but cause anxiety in comparison with the increase in the number of deaths, Italy has been able, by restricting emigration and by repatriating many of her men, to considerably increase her demographic assets.

This is proved by the following table, which gathers in synthetic form the internal and external movement of the population of the Kingdom from 1913 to 1916:

MOVEMENT OF THE POPULATION FROM 1913 TO 1916.

| YEARS | Births | Marriages | Deaths | Trans-oceanic Emigrants | Returned Trans-oceanic Emigrants | Increase in population |
|-------|-----------|-----------|---------|-------------------------|----------------------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 2-4-5+6 |
| 1913 | 1.122.482 | 264.235 | 663.966 | 559.566 | 188.978 | 87.928 |
| 1914 | 1.114.091 | 252.187 | 643.355 | 233.144 | 219.178 | 456.770 |
| 1915 | 1.060.937 | 185.675 | 741.143 | 65.942 | 167.925 | 421.777 |
| 1916 | 881.626 | 105.881 | 721.558 | 74.202 | 39.039 | 124.905 |

Even taking into account the fact that over 60.000 deaths should be added to these figures, owing to deaths on the battle field or in enemy countries, the proper deduction from the foregoing table is that the net increase in the population of the Kingdom during the first two years of the war (1914 and 1915) was greatly superior and in the next year, 1916, not inferior to the increase recorded in 1913.

The data for 1917 are not yet forthcoming; but on the one hand the submarine campaign has practically annulled transoceanic emigration (9209 emigrants), on the other, summary and incomplete investigations give us the certainty that the number of deaths is not so high and the number of births not so reduced as to create a *deficit* in the budget of the population.

So that our people, who have gained a million inhabitants in these four years of war, continue unmoved along the path of their natural development, notwithstanding the world wide upheaval.

Individual ubiquity and increase in enterprises.

The Italian workman has not only numbers on his side. Comparable to a vehicle that multiplies the mass of its transports in proportion to its speed, Italian hands are in a position to

multiply the sum of their labour in virtue of their singular mobility. Our workman seems to have the attribute of Saint Anthony : he carries in his wallet the gift of ubiquity. When the harvest is ripe in the Puglie Tableland, in the Roman Campagna, in the Plain of the Po, the workers from the neighbouring mountains come down to reap in the plains; but when, a few days later, the wheat is ready for reaping in the mountains, they will have already returned to their native place to obey the second call of the goddess Ceres. In winter time, the labourer from the Abruzzi becomes a shepherd and tiller of the soil in the Lazio; the women of Bobbio, of Borgotaro and of Castelnuovo Monti are to be found sorting rice at the beginning of summer in the Lomellina; the country folk of the Marehe are to be found dispersed, between April and October, occupied in brick-making in the various kilns of Italy.

According to the figures of the National Labour Office, about a million workers took part in normal times in these periodical currents of internal emigration, thus utilising their working capacity to the full. But a still more characteristic phenomenon has made its appearance, similar to this one, in more recent times. Fifty or sixty thousand Italian emigrants would embark at Naples or Genoa, in September or in October, for the winter harvest in the Argentine Republic. In spring, they would embark again at Buenos Aires, returning to their own homes in time for the summer harvest in Italy. When autumn came round again, they would once more take to the sea, like swallows. And these migrating swallows would take wing from nearly all the regions of Italy: from Piedmont and from Sicily, from the Marche and from Calabria. Thus Italian labour has acquired the currency of coin, the regularity in movement and distribution of a postal service, the fluidity and portability of an electric current. The working man of the Appennines may have seemed at first sight the most adventurous man in the world, whereas he is simply the most patient, the most methodical, the most sober, the most attached to his family, the most desirous of improving and elevating its conditions.

Skill of Italian workmen.

Italian labour is not only mobile but possesses, contrary to a generally accepted prejudice, singular gifts of ability and specialisation. Certain Italian industries owe their prosperity to the peculiar skill of its artisans. There are manufactures connected with certain zones of the national territory, precisely owing to the fact that in these particular zones the workmen have traditional aptitude and training for that type of work. Thus, the manufacture of gloves flourishes in Naples. In the Province of Lucca, the spinning of sewing cottons has developed prodigiously during the last years; in Monza, the manufacture of felt hats; in Alessandria, the manufacture of hats made of rabbit fur; in the Bergamasco, in the Cremonese and in the Piacentino, the production of *corozo* buttons; in the Brianza, lace-making; at Fabriano and Isola Liri, the manufacture of hand-made paper; in the whole of North Italy, the culture of silk-worms and the silk industry. The success of all these manufacturing activities, some of which are characteristic of Italy, is almost entirely entrusted to the skill and experience of local workmen, who in great part continue and in great part renew the glorious traditions of Renaissance artisanship.

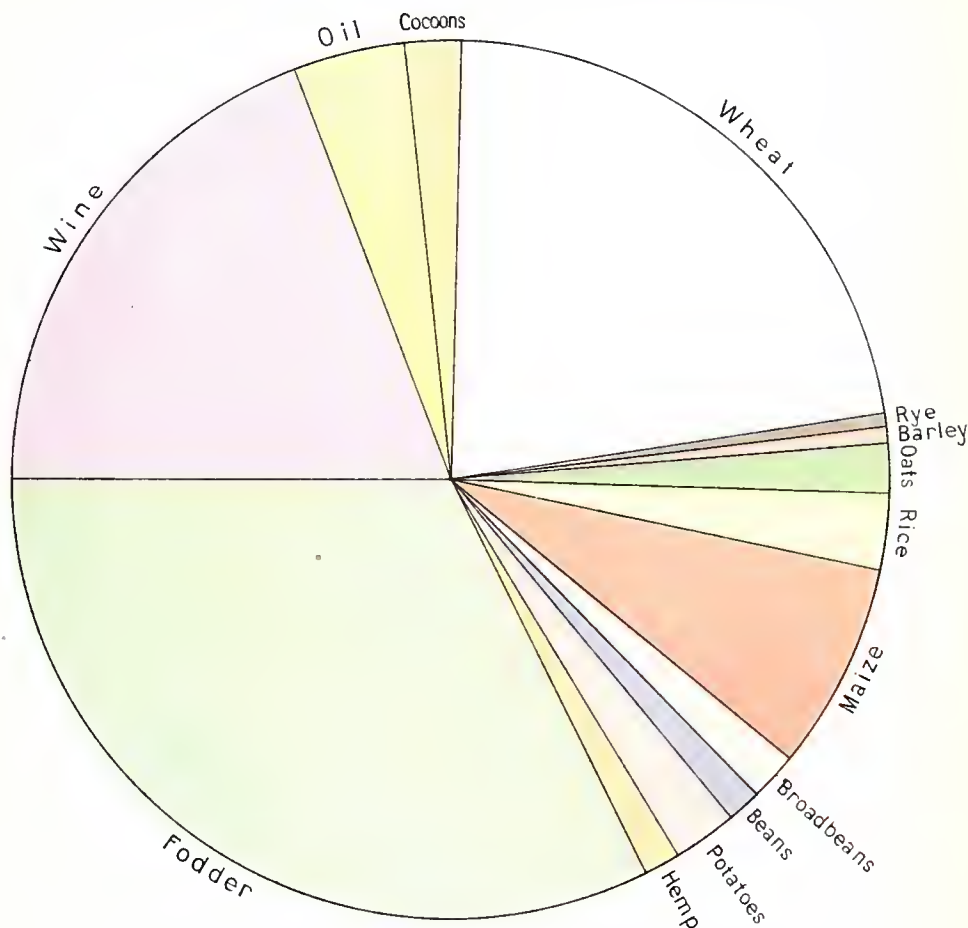
And if be true that the density of its population and the qualities this population possesses enter into the industrial and agricultural fortune of a country as a primary element, Italy may rest in perfect security that this fortune will be neither niggardly nor ungrateful to her.



TABLE IV.

PRINCIPAL SOURCES OF AGRICULTURAL WEALTH

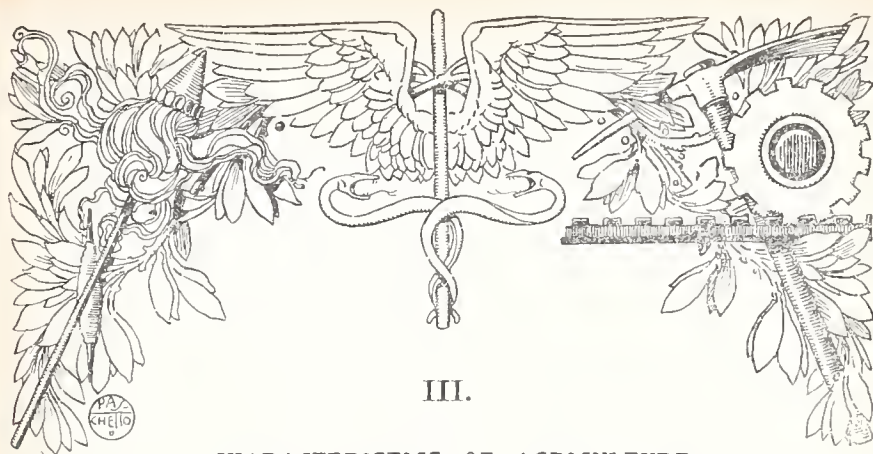
(The sectors are in proportion to the yearly profits from each product)



| Products | Average crop in million quintals | Average price in lire | Average yearly revenue in million lire |
|----------------------|-------------------------------------|--------------------------|--|
| | 1909-15 | 1912-14 (1) | |
| Wheat | 48.8 | 30 | 1464.0 |
| Rye | 1.3 | 22 | 23.6 |
| Barley | 2.1 | 21 | 44.1 |
| Oats | 5.0 | 23 | 115.0 |
| Rice | 5.0 | 38 | 190.0 |
| Maize | 26.4 | 19 | 501.6 |
| Broadbeans | 4.8 | 25 | 120.0 |
| Beans | 2.6 | 31 | 80.6 |
| Potatoes | 16.4 | 10 | 164.0 |
| Hemp | 0.9 | 96 | 85.5 |
| Fodder | 238.8 | 9 | 2149.2 |
| Wine | 41.7 | 30 | 1251.0 |
| Oil | 1.8 | 149 | 269.2 |
| Cocoons | 0.44 | 300 | 132.0 |
| | | | 6594.8 |

(1) The price of rye, barley, broadbeans, beans and hemp is the average price of 1914.
The standard measure is calculated in hectolitres for wine and in quintals for other products.





III.

CHARACTERISTICS OF AGRICULTURE

Principal products of the soil.

The development of a nation's agricultural production is as valuable an asset as its labour resources, both because the produce of the soil is in itself a direct source of wealth, and because — as enunciated by theory and confirmed by experience — all industries are more apt to flourish where the population is densest and in territories that are made fertile by the cultivation of the soil.

Italy, in proportion to its surface, is one of the countries in the world that enjoy an important agricultural production. If it were not so, it could not, with but 287.000 square kilometers of territory, afford subsistence enough for 36.500.000 inhabitants, most of them addicted to agriculture, that is 128 inhabitants a square kilometer.

In the table on the following page, a general summary will be found of the twenty principal heads of agricultural produce between 1909 and 1915:

GENERAL SUMMARY BETWEEN 1909 AND 1915.

| PRODUCTS | OUTPUT | |
|--------------------------------|---|-----------|
| | Average for seven years 1909-1915 | Year 1916 |
| | Thousand quintals | |
| Wheat | 48.863 | 48.044 |
| Rye | 1.316 | 1.357 |
| Barley | 2.130 | 2.201 |
| Oats | 5.038 | 3.785 |
| Rice | 4.971 | 5.203 |
| Maize | 26.447 | 20.714 |
| Seed beans | 4.770 | 3.776 |
| Beans and minor vegetables . . | 2.551 | 952 |
| Potatoes. | 16.403 | 14.772 |
| Sugar Beetroots | 16.900 | 13.483 |
| Hemp | 881 | 724 |
| Flax | 27 | 25 |
| Wine . (Thousand Hectolitres) | 41.742 | 38.960 |
| Oil . . (» ») | 1.766 | 2.062 |
| Silk cocoons | 407 | 358 |
| Miscellaneous fruits | 7.285 | 12.547 |
| Chestnuts | 6.150 | 6.318 |

The corn budget.

Before the world war made its influence felt on the productivity of the earth, by withdrawing labour and improving reserves, the average yearly production of wheat amounted to about 49.000.000 quintals, equal to 138 kilograms per inhabitant. This was more than sufficient for the Italians

of 1881, who with an average production of 36.500.000 quintals, imported about 2.500.000 quintals, so that a total provision of 39.000.000 quintals satisfied a population of 28.500.000 inhabitants, on the basis of 137 kilograms per head. If the Italians of to-day were as poor or as thrifty as the Italians of twenty-seven years ago, they would have attained, in this respect, their complete economic independence of foreign countries, and would not need to import many million quintals of wheat from Russia, Roumania, the Argentine Republic and the United States. Instead of which in the six years between 1909 and 1914 the average importation was 14.500.000 quintals, which, added to the 49.000.000 of national production, made a total of 63.000.000 to 64.000.000 quintals yearly, or 181 kilograms per inhabitant, due allowance being made in this calculation for the quantity needed as seed.

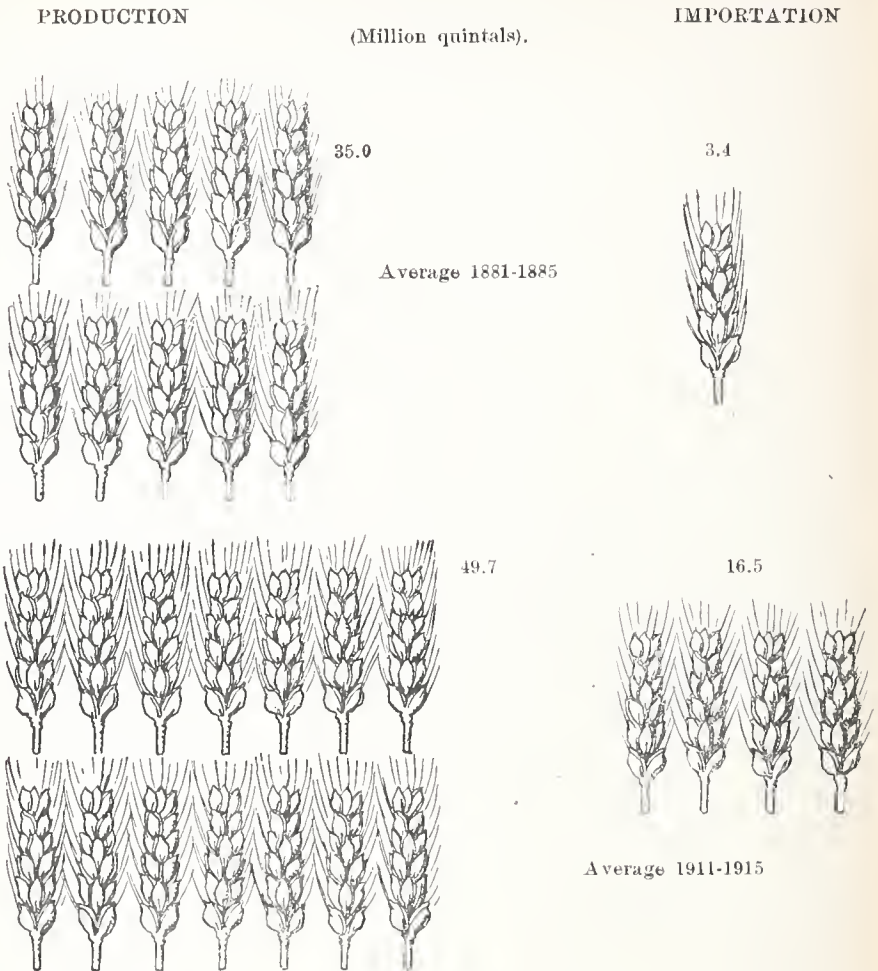
The development of the cities, the increase in the population, and above all the higher general standard of economic welfare explain this increase in the consumption of wheat, which, if it prevents us from being independent of other States and therefore reaching complete autonomy in the matter of wheat, should nevertheless serve the purpose of reassuring us as a symptom of marked improvement.

The culture of wheat is active to-day in every province of Italy, on level and on mountainous land, in fertile as in more arid zones.

The surface covered by the culture of wheat measured 4.769.000 hectares in 1914; which means that the average production amounted to less than 11 quintals per hectare. The standard of productivity is therefore somewhat low. But this is due to the fact that Italy is a country in which mountains predominate, and that the extension given to the cultivation of wheat on ungenerous soil considerably lowers the average of the crops obtained.

Nor will it be superfluous to recall that, in proportion to its surface, Italy is the country that produces most wheat in the world: 171 quintals per square kilometer.

Production and importation of wheat.



The Italian peasant dedicates much of his care to the cultivation of maize. In the six years between 1909 and 1914, an average of about 25.500.000 quintals yearly was produced. In Europe, this rate of production is surpassed only by Austria-Hungary (54.000.000 quintals) and by Roumania (29.000.000); in America, we are surpassed by the Argentine Republic (57.000.000 quintals) and by the United States (694.000.000), the latter being the great world mart for this type of cereal.

Production and importation of maize.

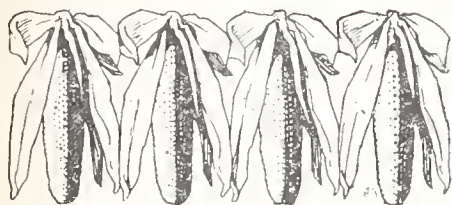
PRODUCTION

(Million quintals).

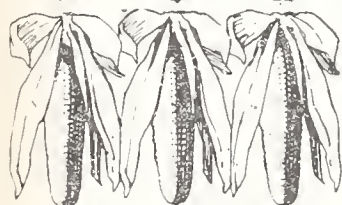
IMPORTATION

21.9

0.6

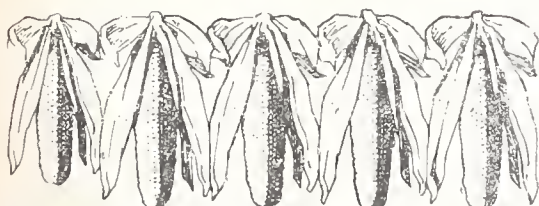


Average 1881-1885

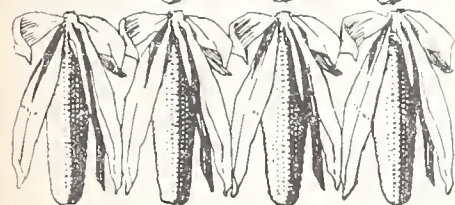


26.8

3.1



Average 1911-1915



But the national production is not enough for the needs of the North of Italy, where it forms the staple food of our peasant population, so much so that in the six years between 1909 and 1914 3.000.000 to 3.500.000 quintals of maize were imported yearly on an average, principally from the Argentine Republic.

If Italian agriculture holds, with maize, one of the first places in comparison to other Nations, she has, with rice, an

absolute European supremacy, which allows her the luxury of exporting.

This cereal, which is distinctly Asiatic, yielding in Japan an harvest of 100.000.000 quintals and reaching in India the prodigious figure of 400 and more million quintals, has found marshy zones in our country peculiarly adapted to its growth, particularly in the Lomellina and in the district of Novara, where it is grown, dried, and glazed in apposite works, excellent of their kind. The average crop was, in the five years between 1910 and 1914, 4.889.200 quintals.

The world supremacy of Italy in the production of wine.

We come, now, to the oldest, most characteristic, most purely indigenous production of our country: the vine. Italy is the true fatherland of wine. In proportion to its surface, our peninsula is the territory where more grapes are grown than in any other part of the world. This is made evident by the attached map, with the exposition which accompanies it. Of the 140.000.000 hectolitres of wine annually produced by all the cellars of the world, about one third must be attributed to Italy, one third to France, one third to Austria-Hungary, Spain, Portugal, Algeria and all other countries collectively. Wine is also one of the principal sources of national wealth, and it is in the hopes of all that, properly industrialised, this product may one day become an important branch of Italian export trade. This is far from being a fact so far. We sell to foreign countries barely 1.500.000 hectolitres per annum, i. e. a little more than 3 per cent of our output. The cause of this state of things is to be found in the customs duties which prohibit the entry to the richer marts, and in the dispersion that characterises the wine industry in Italy, which is still local and domestic. When Italian wines, properly treated and standardised according to a few of the more

appreciated types, shall satisfy the general taste as a luxury beverage, as is the case with other well known foreign brands, the Nation will realise what a treasure the antique Bacchus has entrusted to her pergole and vineyards, and will enjoy to the full the benefits reserved for her by her supremacy in this commodity.

Export products.

Agricultural and commercial Italy would not be treading an unknown path in developing her export wine trade as it might and should be developed. The diverse assortment of the products of the Italian soil, some of which are characteristic of our climate, others exclusive to our territory, feeds a varied and important international traffic. Oranges and lemons, while they give prosperous life in their own districts to the industry of extracts, such as citrate of calcium and citric acid, load entire trains and form the entire cargo of ships destined for Central Europe, North America and England. Oil is also a source of prosperous traffic in the old and new Continents. Apples and pears, prunes and apricots, peaches and cherries, nuts, chestnuts, hazel-nuts and almonds, dried figs and pistachios, which until yesterday garnished the dinner tables of Europe or were among the necessary ingredients in cakes, preserves, sweets, crackers, candies, pastry and in all sweetstuffs whether national or foreign. Tomatoes and relative preserves, which, as a dressing for maccaroni find an outlet in the wake of Italian emigration, at the same time introducing a taste for such typical national foods among the inhabitants of other countries. Fresh flowers, gathered in the sweet-scented gardens of the Ligurian Riviera, that brought their gentle fragrance to drawing-rooms and dinner tables, adorning weddings and cradles, or the new graves of our neighbours, offering up their chalices and petals to the perfume distilleries of France and Italy. Vegetables and poultry, butter, eggs and cheese, sent

from the rich farms of Lombardy, Venetia and Emilia, brought hither and thither to the palates of the two hemispheres the good fame of our generous and multifarious Italian agriculture.

The vicissitudes of the live stock market.

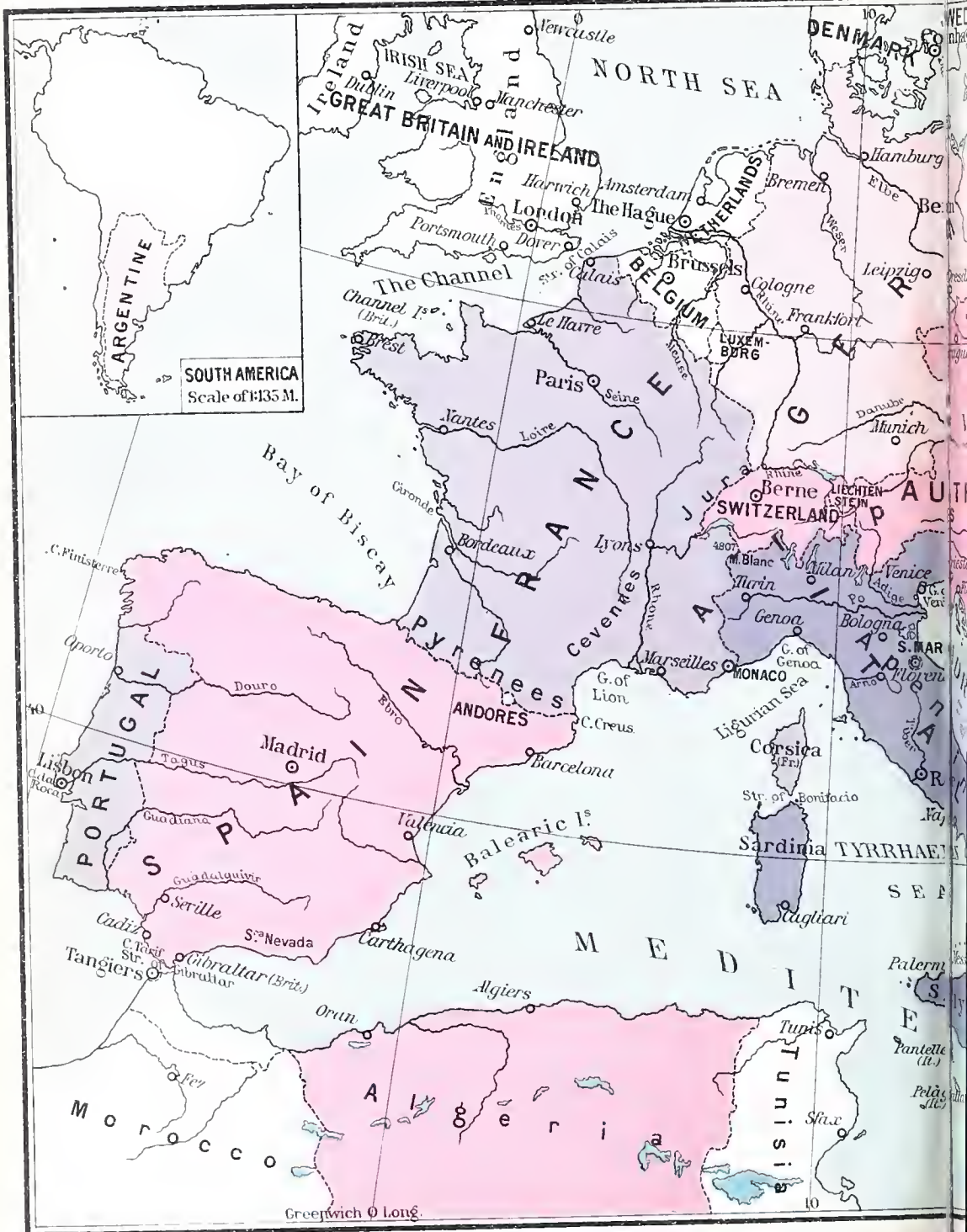
It would indeed be an imprudent optimist who would uphold the theory that the war had not somewhat discoloured the rosy hues of this picture. Apart from the desiccation of the principal currents of agricultural exportation, that were principally directed before the war towards the Central Empires and are interrupted to-day because of the universal conflict or for imperious alimentary reasons, the war has largely contributed to the depletion of our live stock.

Two special censuses, taken in 1881 and 1908, had caused us to ascertain the fact that our possessions in live stock had followed an even greater increase than that of our human population. Thus, while we had 657.000 horses in 1881, we had 955.000 in 1908; while the number of donkeys rose from 674.000 to 849.000; pack and driving mules from 294.000 to 398.000; oxen from 4.772.000 to 6.198.000; pigs from 1.164.000 to 2.507.000; sheeps from 8.596.000 to 11.163.000; goats from 2.016.000 to 2.715.000.

These remarks tend to show that in comparison to other countries, our agricultural economy was deficient in pigs and horses, fairly well supplied with draught oxen and milch cows, abundant in sheeps and goats, and only surpassed in Europe by Spain in the relative quantity of mules and donkeys (37 per 1000 inhabitants).

Between 1908 and 1914 the animal population had still further increased when war overtook us; its imperious necessities then brought about a gradual sacrifice of our zoo-technical patrimony.

The heads of cattle already destroyed since the beginning of the war can be calculated at about two million; the number bred during the intervening period has already compensated



WORLD PRODUCTION OF WINE

TABLE V.



6 000 000

300 400 500
Kilometers



this reduction in part, so much so that the cattle census carried out not long ago showed results, as to number of heads, not so very different from those of the 1908 census.

To the drain on draught cattle, must be added in greater proportion the drain on labour. At the end of 1917 the peasants called to the colours numbered about 2.200.000, equivalent to 25 % of the agricultural population over ten years of age.

It is not to be wondered at if agriculture, and notably the culture of wheat, has suffered from such a state of things. If to this we add the diminished importation of chemical fertilisers (from about 7.000.000 quintals in 1912 to little more than 5.000.000 quintals in 1916), the difficulty in the supply of machinery and other causes connected with the war, an explanation will be found without difficulty of the phenomenon — which was principally lamented last year — of the diminution in the surface dedicated to agriculture and particularly in that dedicated to the cultivation of wheat.

Agrarian mobilisation.

The reaction of public opinion and of the Government to this relaxation in the productivity of the soil has been both vigorous and efficacious, and energetic measures have been taken to counteract it.

In order to compensate the scarcity of draught cattle, the Ministry of Agriculture has created a State concern, furnished with ploughing machines drawn by petrol tractors, which are hired to landed proprietors and farmers, and managed by soldiers of the older classes or unfit for active service. In a few months this Government concern has bought one thousand tractors in America, for distribution in all parts of Italy, and another thousand are being put into use as they arrive, welcomed as manna from heaven by the farmers of every province, particularly in the South.

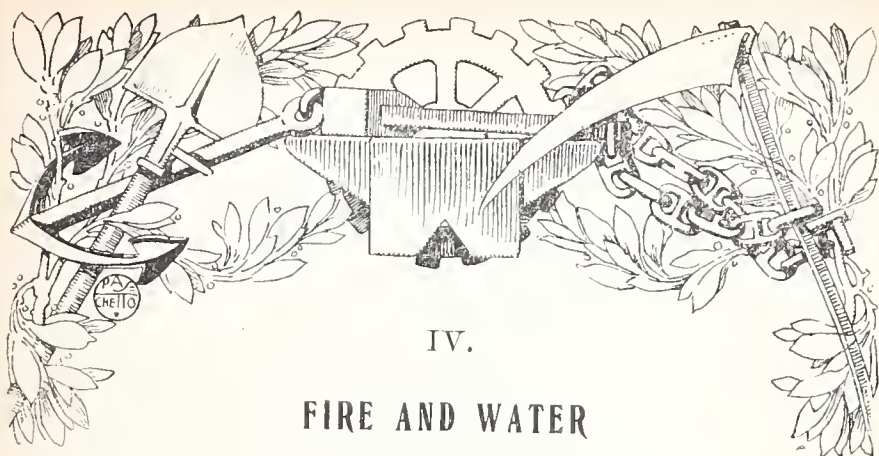
To supply the need of hands, mowing and reaping machines and machinery of all kinds have been procured; special leave from the front for agricultural purposes has been organised in rotation; the transportation of workers from one locality to the other has been facilitated by reduced railway tariffs, while at one time prisoners of war were largely detailed for work in the fields.

To combat this forsaking of the land, which is not only economically and logistically but also socially and morally detrimental, the duty has been imposed on all alike of cultivating the areas that had been diverted from agriculture, the Government authorising the forcible occupation of rural properties which owners had left uncultivated, and their transfer to local authorities, associations or single individuals who were disposed to cultivate the soil in lieu and stead of the owner.

It became urgent to stimulate in every possible way the culture of wheat and other cereals as opposed to grass land, industrial cultures or those unessential to the problem of human food. With this aim in view the division of the soil into different types of culture was fixed by the Government province by province, so as to widen the area devoted to the cultivation of wheat at the expense of remaining products.

These arrangements, throughout which a well-thought out program of *agrarian mobilisation* is delineated, aimed at strengthening resistance and saving as much as possible of the Allies' food contribution. The results are already evident. The wheat area had increased, in 1918, in the proportion of about 5 %, in spite of new calls to the colours and the grave difficulty of procuring farm stock.

Thus it is not to be doubted that when her valiant defenders shall have returned to the land after the war, and her considerable patrimony of live stock shall have been restored, Italy will be able to re-establish her rural functions fully and rapidly, starting again on her swift ascent towards ever higher grades of fruitfulness and well-being.



IV.

FIRE AND WATER

The search for coal.

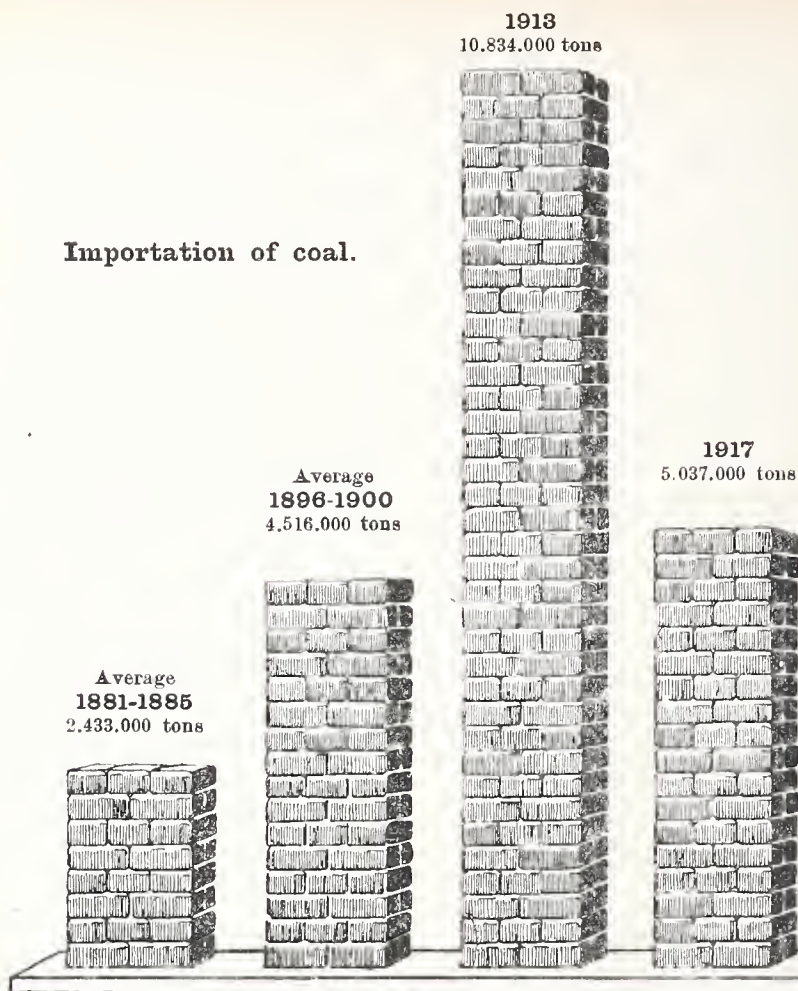
In order to produce, man must discipline the elements. And he has had to contend, in the course of time, with elements less and less of a docile nature. In olden times, they consisted of draught and pack animals, yesterday they were represented by the heat of fuel, to-day and to-morrow by the force of falling waters, in the future perhaps they will be represented by the wind's breath or the rays of the sun.

Given that modern technique still leans to a large extent on the exploitation of combustible substances, the presence in an industrial country of coal, the most powerful of known combustibles, is a matter of no small importance.

Italy possesses no coal mines. Or, to be accurate, none have been discovered so far. But is this lack such as to constitute an irremediable economic inferiority in the situation she holds towards the countries with which she competes?

It cannot be denied that the lack of coal is a drawback. There are industries in which the combustion of fuel is very great in comparison to other factors of production; and in which the relative outlay is preponderant as compared with

Importation of coal.



the budget of corresponding concerns. The cost of transporting coal by sea, worse still, of transporting it by land, heightens the cost of this material when unloaded in Italy. Iron works, for instance, have on their debit side a colossal outlay for the transport of coal from Cardiff to Genoa and Naples. Finally there are metal industries that it is altogether vain to attempt in Italy owing to the excess of caloric power which they require; such as the reduction of zinc minerals into metals which requires four tons of coal for every ton of

mineral. This circumstance makes it cheaper to export zinc minerals to England from Italy, where they are extracted, and thence bring back the finished zinc metals, than to do our own smelting in Italian works with the help of English coal.

From these examples it will be seen how desirable it would be, from the point of view of international competition, to have coal mines within our own doors. But is it absolutely excluded that our peninsula should have traces of it? This is a question that Ing. Elvino Mezzena, Director of the « *Montecatini* », General Company for Mineral Industries, has tried to answer.

Ing. Mezzena reminds us that the formation of coal beds, or *lithanthracite*, goes back to a definite geological period known as the *carboniferous age* and that these beds were accumulated in soil at that period marshy and low-lying, broken up by lagoons and anyhow situated near the sea shore. Sometimes these strata of lithanthracite are near the surface of the soil, and in that case it is easy enough to recognise and exploit them. Oftener they are to be found at levels more or less deep and the researches are consequently more or less laborious and costly.

According to the hypotheses of the geologists, the present peninsula of Italy was almost entirely under water during the carboniferous period; while to the west, in the middle of the Tyrrhanean Sea, a continent existed — called *Tirrenides* — which is submerged at the present day. This continent comprised part of Sicily, Sardinia, Calabria and Liguria. Supposing that these fragments of land which have survived presented the above mentioned circumstances of position and structure, i. e. lagoon and marsh-lands, situated near the sea-coast, nothing would exclude the possibility of finding there to-day, by means of accurate soundings, the same treasures of fuel that constitute the wealth of other zones of similar history and structure.

Starting from this train of reasoning, Ing. Mezzena proposes a series of systematic perforations, to be carried out to a depth of two thousand meters below the surface of the

soil, in selected localities. Such an enterprise would involve no slight expenditure, and for this reason Ing. Mezzena has invoked Government aid. How far it would be actually suitable for the Government to face the unknown proposition represented by such researches, it is however certain that the hope of gaining for Italy this new source of wealth is by no means lost. And if such an experiment were to be crowned with success, the victory over nature would not have a purely economic bearing, but a political one as well. To be able to rely, within one's own territory, on elements of the first necessity for one's own industrial existence means increasing also the degree of political independence of a country. And this is always a factor of incalculable value in every eventuality whether of war or of peace.

National lignites.

Meanwhile, systematic investigation as to the existence of coal or lithanthracite being postponed until better days, Italy is realising enormous progress in the production of *lignites*.

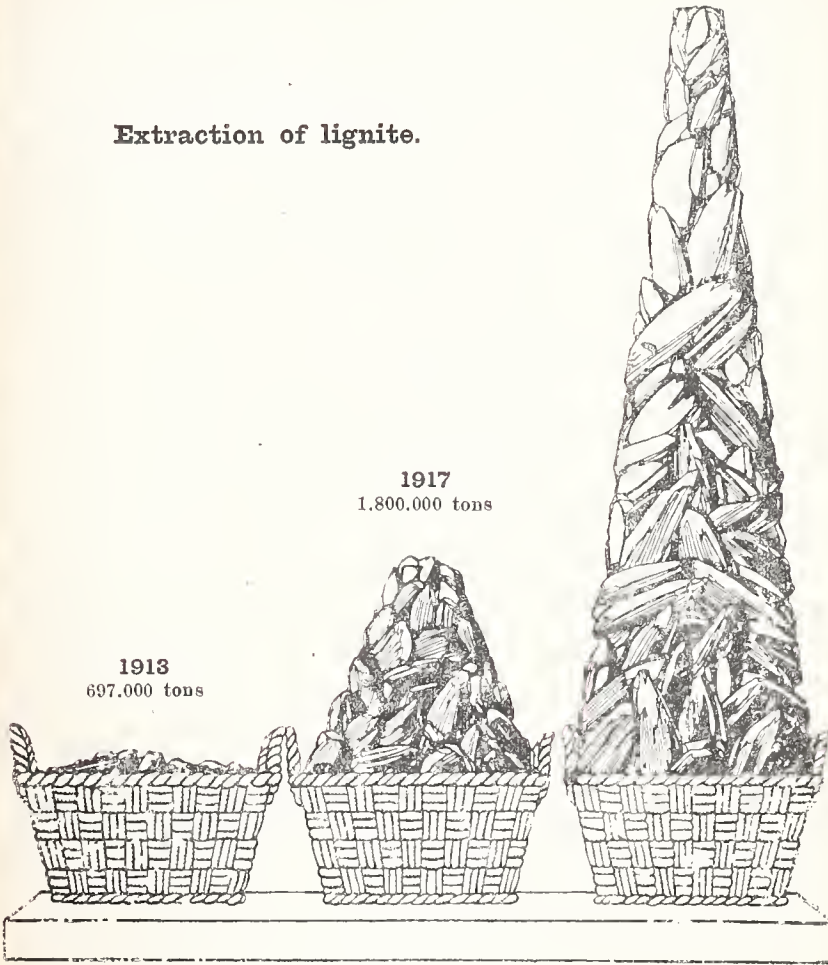
This fuel, which is of a more recent geological formation, develops, weight being equal, scarcely 35 to 40 % of the heat given out by coal, but it is a useful substitute for coal in many industries and also in railways. The exploitation of lignites, as well as that of bituminous fields, of peats and petrol that lie in our sub-soil, has been hitherto neglected owing to the ease and cheapness with which analogous products could be obtained from abroad, and also because of the limited importance attributed to the mineral problem considered as a strictly national problem. Now, for more than a year the « National Fuel Commission » has been in operation, with On. De Vito at its head. The latter has taken the problem closely to heart and has given a vigorous impulse to the exploitation of our mineral beds. Thus in 1917 about 1.800.000 tons of lignite were extracted, mostly in Tuscany, whereas in the

Extraction of lignite.

1918
(Previsions)
5.000.000 tons

1917
1.800.000 tons

1913
697.000 tons



period anterior to the war the average was only 500.000 tons. In 1918 it is hoped that we shall have made another mighty step forward, bringing the total production to 5.000.000 tons.

Thus the wealth of the Italian sub-soil has been marvellously well exploited. The quantity produced last year was equivalent to a saving, in calories, of 800.000 tons of British

coal, on about 10.000.000 tons imported by us in normal times. And if our hopes prove well founded for the current year, we shall realise a saving equivalent to 2.000.000 tons of coal, equal to one-fifth of the yearly imports!

Thanks to this feverish intensification of effort, the use of our national coal is being admirably extended; sluggish prejudices are melting away; new systems of boilers and funnels are being tried with the happiest results. Already in some regions of Italy, and especially in Sicily, Calabria and Sardinia, the railways and local industries are almost entirely fed by Italian mines.

Hydroelectric supremacy.

However, even by utilising to the full the 167 lignite mines actually in operation, Italy could never nourish the illusion of doing without imported lithanthracite, which has infinitely more powerful heat giving properties. The abundant water power with which our country is copiously endowed in every region contributes however to the motor energies of the peninsula through more and more extensive applications.

It is a happy image which opposes the « black fire » given by coal to the « white fire » produced by water. And this white coal is truly the characteristic resource of Italy.

Without boasting the mighty falls of Niagara, our mountains everywhere give out a wealth of cascades, leaps and rapids that lend themselves admirably to the production of electric energy and motor power.

Proof will be found in the following table:

TABLE VI.

HYDRAULIC POWER IN THE KINGDOM OF ITALY



| Regions | Thousand HP on the basis of the ordinary course of waterfalls | Surface in thousand square kilom. | HP. per square kilometer |
|--------------|---|-----------------------------------|--------------------------|
| Piedmont | 1250.0 | 29.4 | 42.5 |
| Liguria | 60.7 | 5.3 | 11.5 |
| Lombardy | 1794.9 | 24.2 | 36.8 |
| Emilia | 115.8 | 24.5 | 5.6 |
| Tuscany | 130.0 | 20.8 | 5.4 |
| Marche | 170.5 | 24.1 | 17.6 |
| Umbria | 334.5 | 9.7 | 34.5 |
| Rome | 117.9 | 9.7 | 9.7 |
| Abruzzi & M. | 447.9 | 12.1 | 27.1 |
| Molise | 259.4 | 16.5 | 15.9 |
| Campania | 2.5 | 16.3 | 0.1 |
| Apulia | 88.0 | 19.1 | 8.8 |
| Basilicata | 167.9 | 10.0 | 11.1 |
| Calabria | 45.0 | 15.1 | 1.8 |
| Sardinia | 15.0 | 25.7 | 0.6 |
| Kingdom | 5000.0 | 24.1 | 17.9 |



FUND OF HYDRAULIC ENERGY
IN SOME OF THE PRINCIPAL COUNTRIES.

| COUNTRIES | Energy in thousand HP | | HP existing per square mile of surface |
|----------------------------|-----------------------|----------------------|--|
| | Potential | Actually utilised | |
| United States of America . | 28.100 | 7.000 | 9,30 |
| Canada | 8.094 | 1.700 | 8,74 |
| France | 5.587 | 650 | 27,00 |
| Norway | 5.500 | 1.120 | 44,30 |
| Spain | 5.000 | 440 | 26,00 |
| Italy | 5.000 | 976 | 54,75 |
| Sweden | 4.500 | 704 | 26,00 |
| Switzerland | 2.000 | 511 | 125,20 |
| Germany | 1.425 | 698 | 6,80 |
| England | 963 | 80 | 10,90 |

From this it will be seen that Italy's absolute fund gives her one of the principal places in Europe (nearly equal to France, Norway, Spain and Sweden); while, if we consider her hydraulic wealth in proportion to her area, Italy considerably surpasses these countries, being second only to Switzerland and surpassing by a long way the United States of America and Canada, which latter countries also possess a notable source of power through their famous waterfalls.

To Italy belongs also a high rank in the scale of effective hydroelectric applications. Nearly 1.000.000 HP are now being utilised by us, whereas France has only utilised 650.000, Spain 440.000, Sweden about 700.000, Germany about as many and Great Britain only 80.000.

Whoever has travelled the length and breadth of our country must be aware of the general use of electricity for illumination and domestic and industrial purposes in the smallest villages, in the humblest hovels. The extraordinary number of water courses from the arch of the Alps to the extreme point of Calabria, and in the Islands themselves, and the steep incline at which they flow from their source to a short distance from their mouth furnish an adequate explanation not only of the wealth of the hydraulic power at our disposal, but also of the relative facility in the disposal of it.

From the industrial census of 1911 and also from other recent statistics we can form some idea of the extremely rapid development of electric works in Italy. From 2286 in 1899, they were already 6883 in 1911. The potentiality of these works in regard to Italian industries (including thermic motors) rose, during the same period, from 665.000 to 1.633.000 HP, with an increase of 1.000.000 HP in round figures. The electric motor already accounts for over 50 % of the dynamic power of Italian industries. Another 20 % is represented by hydraulic motors, which also draw their life from the wealth of water courses of the country, in so far as they directly utilise natural hydraulic energy. The marvellous expansion of electricity in all fields of national life has not on the other hand curbed the successive applications of steam. An idea may be formed of this fact by running over the following statistics, which show an output of 56.000 steam HP in 1876, 297.000 in 1894, 450.000 in 1900 and 677.000 in 1911.

The extremely rapid increment in electric appliances in the peninsula is measurable under yet another aspect. In the financial year 1908-1909 barely 1.098.000.000 hour Kilowatts were consumed, of which 116.000.000 for light and 982.000.000 for motive power; in the year 1915-1916 quite 2.859.000.000 hour Kilowatts were consumed, of which 216.000.000 for light and heat and 2.643.000.000 for motive power.

Towards the electrification of railroads.

The enormous actual cost of coal, in the same way as it has contributed a decisive impulse to the extraction of lignite and national fuel, has recalled the attention of experts towards the problem of an ever wider and more complete exploitation of electric energy.

Our State railways only possess at the present moment about 350 kilometers run by electric traction. But thought is already being seriously directed towards placing the electrification of our railroads on an extensive basis after the war.

There are many fortunate symptoms which allow us to foresee this process of transformation. For instance, the technical and financial plans are now ready for the complete electrification of the Modane-Turin-Genoa line, which is already operated by electricity on the Genoa-Ronco and the Bussoleno-Modane branches. If these electric lines were to develop in the measure in which it is desired, they would represent for the Nation an enormous economic, political and technical advantage. Italy can, and must, aspire to an essential if not complete economic autonomy; and to obtain this result it is indispensable that at least the blood which runs in her veins should be her own, that at least the motive power which animates the fundamental mechanism of her transport system should be her own. Naturally the transformation in question is not equally suitable, from the economic point of view, on all lines; this suitability is most in evidence on mountain lines, on steep inclines cut up by tunnels and wherever a fairly frequent train service is possible.

At present a considerable part of the Italian railways are situated under these conditions. Should their electrification become an accomplished fact, the annual saving of coal would amount to about 1.200.000 tons, of the 2.500.000 tons annually consumed on the entire railway system.

The future of electrometallurgy.

The feeding of Italian railways with « white fuel » is a reality of to-morrow. But, in the field of electrical applications there is one more highly interesting novelty which is not of to-morrow, but of to-day. Iron and steel works which, with their enormous demand for fuel determined the spectacular importation of 2,000,000 tons of coal, are quietly submitting to the predominance of electricity. A powerful smelting plant is about to commence operations in the Valley of Aosta, close to the Cogne iron mines. Electrometallurgy will be applied there to the fusion of fine « ghise » and the production of the finest types of steel. The heating power of coal will be entirely substituted by electricity, while Italian anthracite extracted on the spot and subjected to special treatment will be used as an integrating element in place of British coal. In this manner, metallurgy, which is the principal bulwark of national defence, will have accomplished the miracle of completely freeing itself from foreign contribution.

The lakes of the Sila.

While electricity is under consideration, another great Italian initiative, which is already in process of actuation, cannot be passed by: that is to say the artificial lakes of Sila. This enterprise is one of the most important hydroelectric plant in Europe.

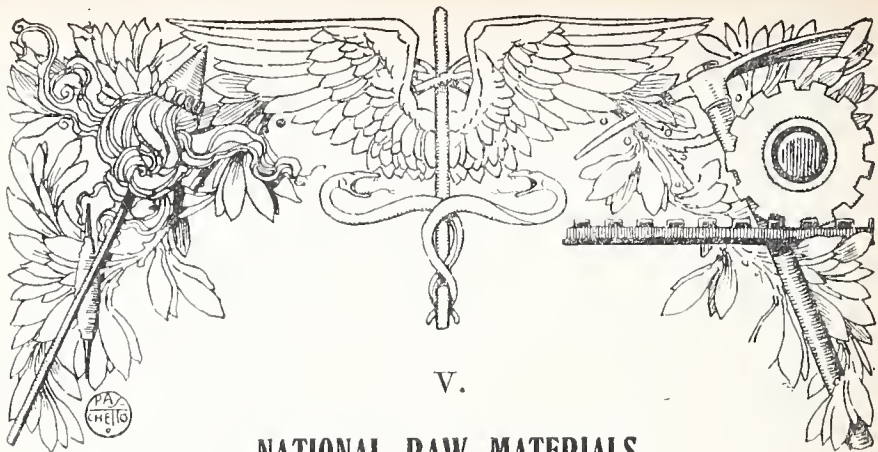
The Sila is a wide table-land with an area of over a thousand square kilometers, occupying a considerable part of the provinces of Cosenza and Catanzaro. This plateau is seamed with water courses of various sizes — the Neto, the Arvo, the Ampollino and others — separated from each other by a series of gently sloping mountain chains, almost entirely covered with pines, firs, poplars and « faggi ». From a maximum height of 1928 meters, the mountain slopes slowly and gradually to a minimum of 1240 meters on the ridge of the

plateau itself; after which it rushes in rocky steeps to the underlying plain, and thence to the sea. The plan of the Silan lakes consists in taking advantage of this special conformation to create a series of artificial lakes on the plateau, round the basins of the rivers Neto, Arvo and Ampollino, which shall completely master and regulate the outflow of the rivers themselves. The continuous water power thus obtained will be utilised by means of several waterfalls of a total drop of about 1000 meters, thus creating a central mass of electric energy equal to about 160.000 HP. But, as the water from the lake reservoirs can be given out in greater or lesser quantities according to the daily and hourly demand, these 160.000 HP may be raised to 300.000 or 400.000 in moments of maximum need, by utilising the water accumulated in the reservoirs during periods of rest, and reduced to minimum quantities during the night, holidays and other periods of industrial inactivity. In this manner, the Silan lakes will become if not the largest, at least one of the most important hydroelectric works in the world.

How can the power thus abundantly provided be utilised? After having satisfied the needs of electric lighting and traction in Calabria, Puglia and Eastern Sicily, a vast proportion of motive power will be left over for great textile, metallurgic and chemical works, sufficient to transform the coasts of Calabria into a zone of intense industrial activity, while the waters flowing down to the plain will be used for irrigation purposes.

A Company has been formed for the purpose of carrying out this program with a capital of 15.000.000 lire: the « Sila Company », which has obtained a Government concession and the support of important financial institutions. This Company is ready to begin work immediately after the conclusion of peace; meanwhile it has considerably perfected the study of preliminary details, and arrangements for the expropriation of the land it must eventually occupy are well on the way to completion.

This is one of the most important public enterprises on the after war program.



V.

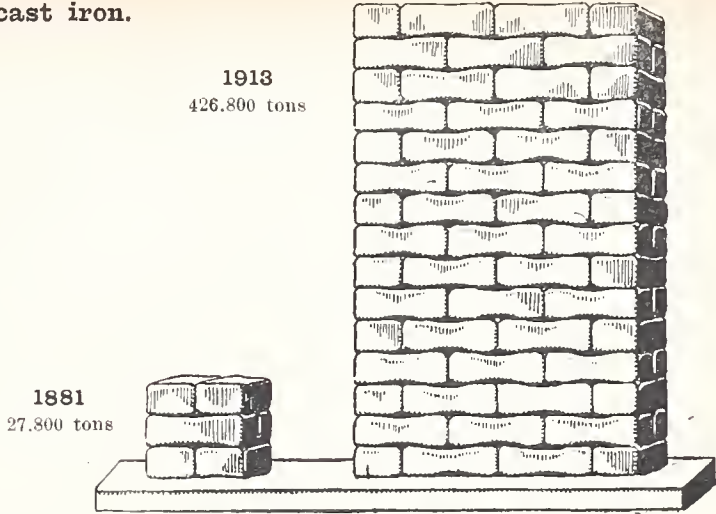
NATIONAL RAW MATERIALS

Iron.

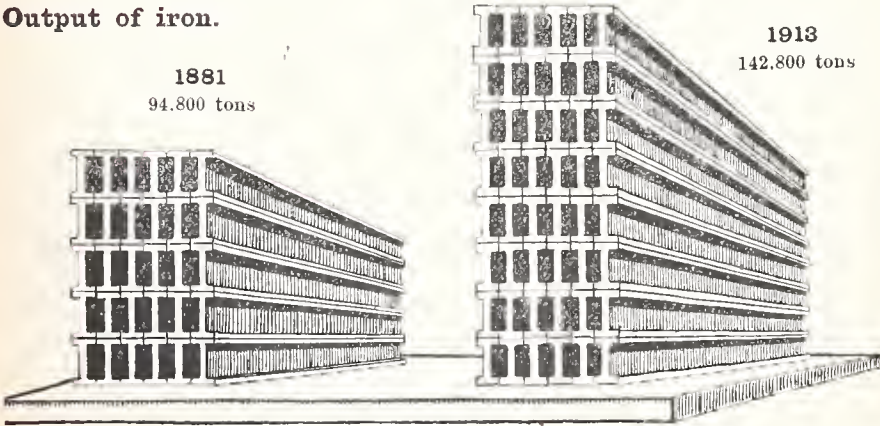
Italy possesses a numerous labouring class, and one which is industrious, highly mobile and educated by tradition in characteristic activities; she possesses a multiform, diffused and, in some régions, opulent agriculture; national fuel does not fail her; she is rich in hydroelectric power. She is also surrounded on all sides by the sea, so that she is placed in the most favourable conditions for communicating with the rest of the world. All these are gifts which confer on our country a marked aptitude for assuming, or, it would be more accurate to say, resuming a conspicuous position among industrial Nations. Another gift not to be neglected is her possession of certain industrial raw materials, some of which confer a real supremacy on our production.

Italy does not possess great quantities of iron — that most important of minerals. The average output of iron ore, in the four years between 1910 and 1913, was 528.000 tons per annum. The growing need of cast iron and steel for munition purposes brought about a more intense mining activity, so much so

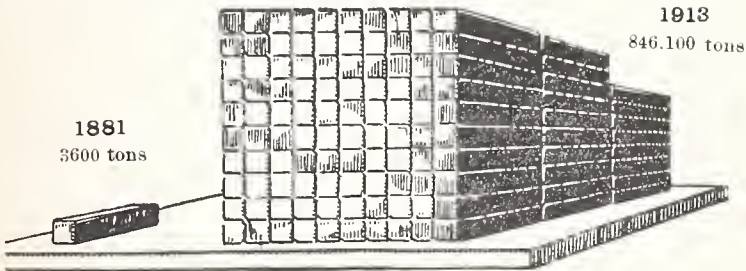
Output of cast iron.



Output of iron.



Output of steel.



that in 1914 706.000 tons were extracted, 680.000 in 1915 and quite 947.000 in 1916, of which 826.000 from the island of Elba alone. This output will no doubt be kept up in the future on a much larger scale than in the past. Within the last years, new mines have been worked in Sardinia, and soon the mineral ore of the Aosta Valley will be treated there in apposite foundries. The principal iron mine clients are the cast iron plants of Piombino and Bagnoli (Naples). The supply is such that these have scarcely any need of applying to foreign countries. Iron, although present in only moderate quantities as compared to the resources of other countries, is a truly national raw material in Italy and may remain so for a long time.

The Elba iron mines are far from being exhausted, judging by the fact that the owner of the concession has very recently increased the plant to a considerable extent; while the Nurra mines (Sardinia) had already yielded at least 175.000 tons of iron ore in 1917, and the Cogne iron mines in the Aosta Valley lend themselves to the most hopeful forecast.

In other parts of the country the existence of further deposits is known, of lesser importance but capable nevertheless of yielding a fair output, also in view of the really excellent quality of all Italian ore. As we have already said on the subject of coal, the point at which present researches have arrived is still far from such as to allow us an even approximate valuation of the wealth of our mineral ore deposits. There is every reason to believe that our sub-soil has many agreeable surprises in store.

Further, our national metal industries may draw their raw material in future from other substances than iron ore pure and simple.

Italy is a poor producer of oxides and iron carbonates, but, on the other hand, she possesses a good quantity of excellent iron pyrites (410.290 tons in 1916), which have only been used so far for the extraction of sulphur and for the production of sulphuric acid; but, in a not distant future — as we are free to suppose from recent experiments —, these

may be usefully applied to the production of cast iron, by utilising the iron detritus left over from the manufacture of sulphuric acid.

Nor does it seem improbable that the treatment of iron-bearing sands of volcanic origin, which are to be found in great abundance on the Lazio sea-shore, may be brought about.

On the contrary, studies are in actual course for the fusion of the iron-bearing granules drawn from these sands by an electromagnetic process.

We may thus take it for granted that our peninsula will witness an increase in the production of a metal widely needed in most industries, for the necessities of modern life and for purposes of national defence.

The monopoly of sulphur and marble.

Over and above iron ore, Italy has extracted about 88.000 tons of copper ore in 1916, 39.000 tons of lead ore, 94.000 tons of zinc ore and 132.524 tons of mercury, thus realising some progress in proportion to the quantities extracted in time of peace.

One product of the soil, in which Italy holds a downright monopoly in Europe, is the sulphur found in Sicily, much sought after in all civilised countries both in peace and war, for agricultural purposes (such as the sulphur treatment of vines and wheat) and for the various industrial applications to which it lends itself. About 400.000 tons used to be extracted before the war; but since the outbreak of hostilities, owing to shortage of labour, work has been reduced so that less than 180.000 tons is the expected output for 1918. American competition, already intensely pronounced before the war, will certainly become acute at the end of the conflict through the opening of new mines in Texas, which, it is affirmed, will bring the total output of the United States up to a million tons. The sulphur mines of Japan have a much more restricted importance, and do not surpass 50.000 tons per annum.

Marble is another industrial raw material which is notably characteristic of our soil. It is no exaggeration to say that, since the marble of Greece and Egypt, of which the magnificent multicoloured masterpieces of old were fashioned, is exhausted or become difficult of access, the stone monuments and buildings that adorn streets, houses, museums and cemeteries to-day, not only in Europe but in the whole world, are nearly all made of marble drawn from the Apuan Alps. As happened in the case of our sulphur mines, the extraction of marble has suffered considerably through the war, sinking from 357.000 tons produced in 1914 to 200.000 in 1915 and to 171.000 in 1916.

Culture and manufacture of hemp.

If we now pass from the mineral to the agricultural field, two textile fibres place our country in the front rank among other civilised Nations, i. e. hemp and silk.

The following table shows that Italy is second only to Russia in the world crop of hemp, whereas it may be calculated a good first if we take the extent of its territory into consideration:

| C O U N T R I E S | Average crop 1909-1914 |
|---------------------------|------------------------|
| | — Thousand quintals |
| Russia | 3549 |
| Italy | 873 |
| Austria-Hungary | 733 |
| France | 228 |
| Japan | 94 |
| Corea | 69 |
| Serbia | 59 |
| Roumania | 19 |
| Bulgaria | 11 |
| Other Countries | 5 |
| TOTAL | <u>5640</u> |

At the present moment, Russia, Austria and the Balkan States being excluded from communications and competition, Italy is the principal, if not the only purveyor of hemp to the Allies, shipping about 400,000 quintals yearly of raw hemp, while the balance of her crop is treated in her flourishing spinning and weaving works and cord factories. The quality as well as the quantity of the Italian product is another reason which causes it to be much sought after in the world market.

Silk supremacy in Europe.

Silk, rightly called the queen of textile fibres, as gold is the king of metals, has ever been held in esteem for its characteristic qualities of brightness, strength and purity. Pleasantly draped in soft folds, it has everywhere been considered an incomparable element of adornment, a fitting frame for grace and beauty. No other material gives such style to feminine clothing and to house decoration. Given the properties of silk, which is the finest of textile fibres, and the combination of the manufacturer's with the dyer's art, the most artistic designs are brought to perfection when reproduced in this material.

Italy is the country which produces the greatest quantities of this marvellous substance both in Europe and the Levant.

The silk industry, directly derived from agriculture and closely connected with it, has always been a factor of wealth in those countries where it is carried on. Silk growing regions properly so called are, however, rare and of limited extension. Silk flourishes only in zones peculiarly adapted by characteristics of soil and climate to the cultivation of the mulberry tree and to the production of the precious cocoon.

According to tradition, this industry originated in China, where some thousand years B. C. the Emperor Hoang-Ti III caused his consort Hei-lin-Shin to raise the grubs born from

the silk cocoon and to experiment the textile use of the wonderful filament obtained. The Empress studied the difficult problem at great length; her feminine vanity and her imperial pride were both at stake. First of all she discovered that the substance which cemented the threads was soluble in hot water, and with the first strands obtained she composed embroideries for her own garments in beautiful floral designs. After that, she made experiments in weaving, making stuffs of vivid colourings with her own hands and gorgeous dresses.

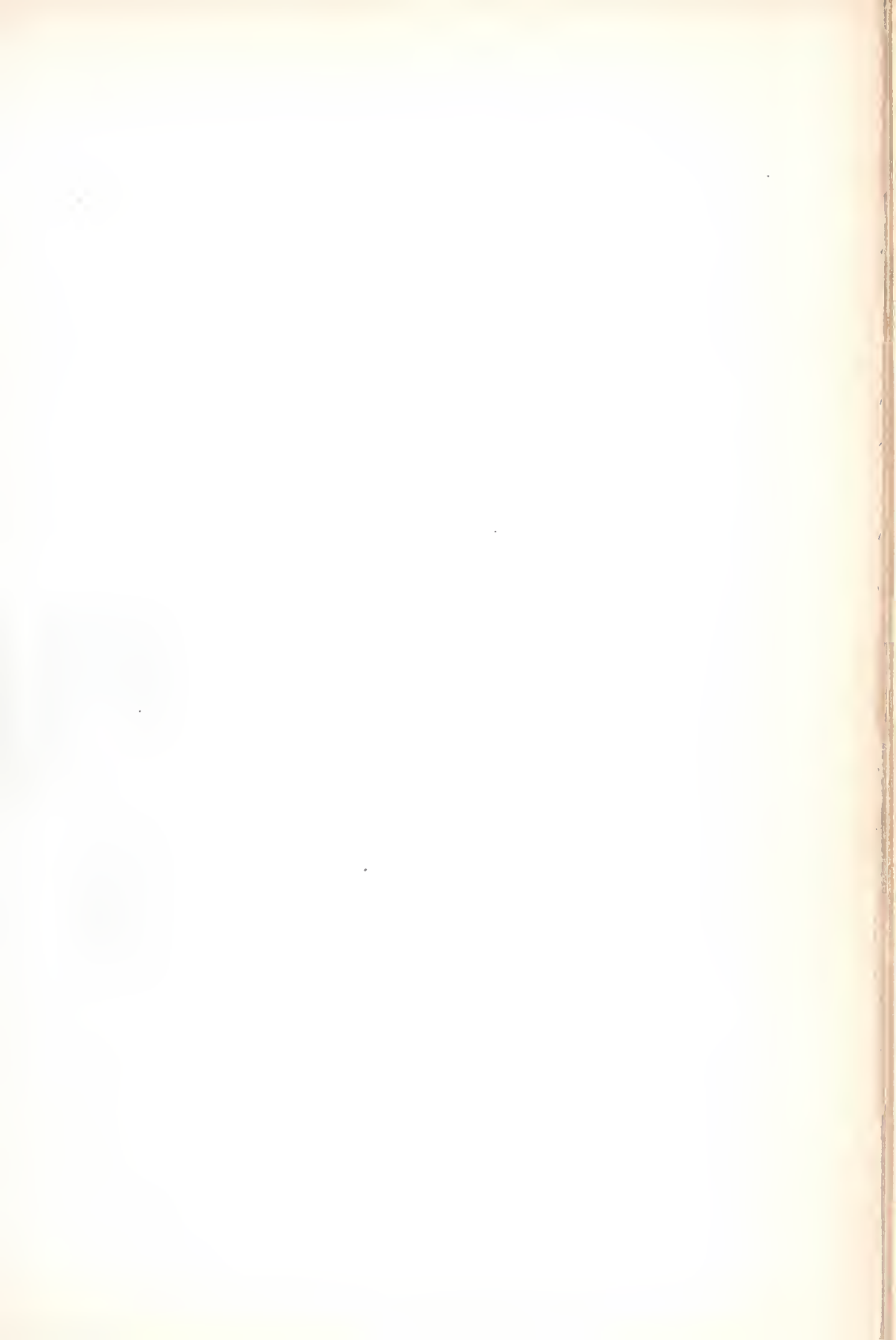
In a short time, China became a great silk centre. The secret of this new art spread to other parts of Asia, and principally to Japan, where silk weaving, facilitated by a natural taste for colour, reached a high degree of perfection.

In Greece, the island of Cos was renowned for the treatment of silk even in the time of Aristoteles; and the superb tissues obtained from Greece and the East were sold at fabulous prices: so much so that the Roman Emperors, who made use of them, enacted laws that limited their purchase to the nobility and State functionaries.

Silk weaving and the raising of silk cocoons were not introduced into Italy until about the eleventh century. The Normans brought this art from Greece to Sicily and Calabria at about the same time as the traders of Venice and Genoa suggested the first national attempts at this industry in Northern Italy. It was not long before Italy became the first centre in Europe for silk spinning, and one of the most renowned in the art of weaving.

The table annexed to the foregoing map shows how during the last years of peace Italy alone produced 3.828.000 kilos of raw silk, more than 60 % of all the raw silk obtained during the same period in the whole of Europe and Asiatic Turkey. It is not given to know the exact production of the Far East; all we know is that 7.754.000 kilos were exported from China (average for 1910-1914) and 10.156.000 from Japan.

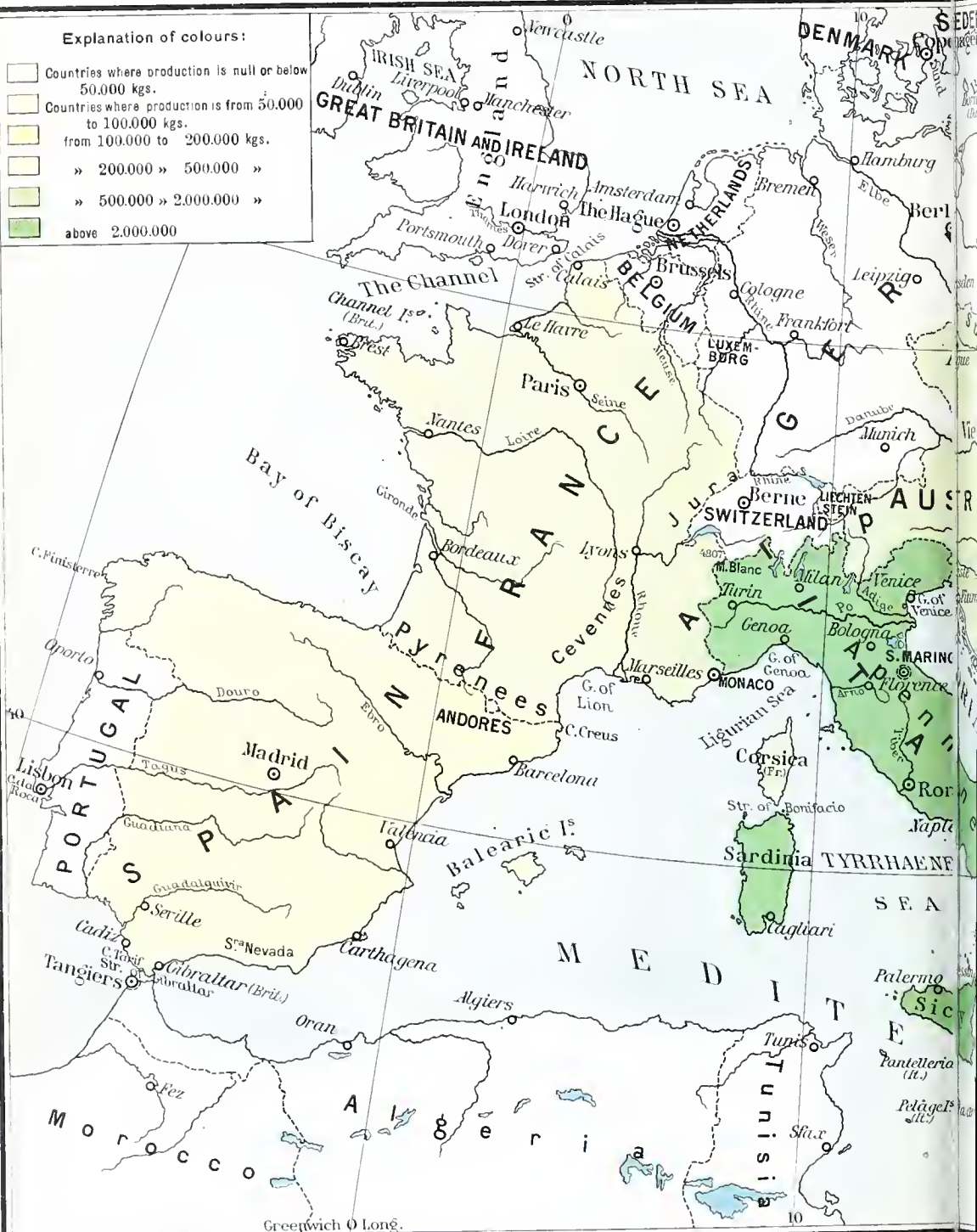
The quantity of cocoons gathered in Italy (average 1910-1914) was 41.700.000 kilos, thus divided according to regions:



AN INDUSTRIAL ANNUAL PRODUCTION OF RAW SILK IN EUROPE

Explanation of colours:

- Countries where production is null or below 50.000 kgs.
- Countries where production is from 50.000 to 100.000 kgs.
- from 100.000 to 200.000 kgs.
- » 200.000 » 500.000 »
- » 500.000 » 2.000.000 »
- above 2.000.000



Greenwich 0 Long.

EUROPE AND THE LEVANT (average from 1910 to 1914)





QUANTITY OF COCOONS GATHERED IN ITALY.

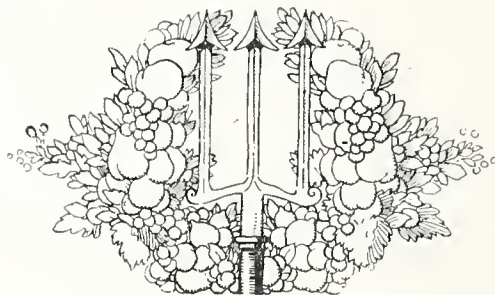
| REGIONS | Average 1910-1914 | 1915 |
|------------------------------|----------------------|------------|
| | Kilos | Kilos |
| Piedmont | 6.370.000 | 4.800.000 |
| Liguria | 210.000 | 60.000 |
| Lombardy | 16.060.000 | 13.600.000 |
| Venetia | 9.920.000 | 8.400.000 |
| Emilia | 2.960.000 | 2.100.000 |
| Tuscany | 2.330.000 | 1.900.000 |
| Marches | 1.440.000 | 1.200.000 |
| Umbria | 390.000 | 230.000 |
| Latium | 40.000 | 30.000 |
| Abruzzi and Molise | 130.000 | 130.000 |
| Campania | 260.000 | 220.000 |
| Calabria | 1.450.000 | 1.800.000 |
| Sicily | 140.000 | 130.000 |
| TOTALS | 41.700.000 | 34.600.000 |

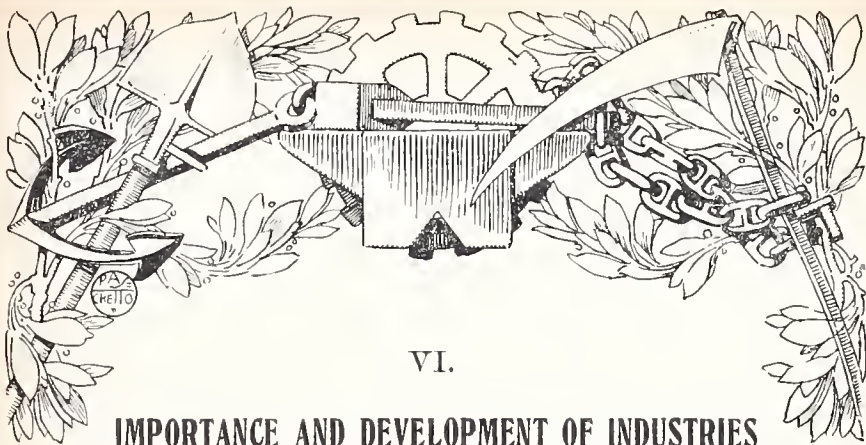
There is one eloquent fact which proves the natural adaptability of the silk industry to our soil and climate, and which at the same time is a clear demonstration of the Italian character of the unredeemed provinces: whereas the silk-worm flourishes all over the Trentino, round Gorizia and in Istria, it is to be found in no other province of the Austrian Monarchy. If we take, for example, the year 1915 — in which the cocoon season immediately preceded the outbreak of the Italo-Austrian conflict — we find that about 800.000 kilos of cocoons were

brought to maturity in the Trentino; 200.000 kilos in the province of Gorizia and Gradisca, and 30.000 in the province of Istria: a total of 1.030.000 kilos, representing about 85.000 kilos of raw silk. For the three provinces taken collectively, the average of fresh cocoons for the five years 1910-1914 was 2.106.988 kilos, equivalent to 180.000 kilos of raw silk.

Silk culture, while conferring on Italy a European supremacy, confers a supremacy also from the point of view of national trade, in comparison to all other exports. Within the last years not less than a quarter and perhaps one third of the total value of the goods sent across our frontiers was represented by silk articles, particularly raw and twisted silk.

Besides our excellent spun products, a marvellous variety of plain, printed and granulated tissues, veilings, velvets, embroideries and brocades of the finest colourings and such as to suit all tastes have been spread throughout the world to bear witness to the perfection of Italian manufactures.





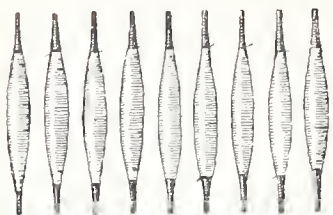
The development of cotton factories.

Italian industries do not base the reason of their existence and development solely on its reserves of material and national resources. A singular spirit of alacrity, a special trend of industrial tradition and labour education have compensated, in many branches of manufacturing activity, the deficiency of raw produce and of fuel which had to be introduced from abroad at considerable expense. Some of the most highly finished and most celebrated industries of our country are applied to raw material brought from extremely distant regions, with which products are manufactured destined, in their turn to be exported anew far beyond the national market.

Let us take one specifically Italian activity: the production of manufactured cotton goods. Since their establishment in North-Italy — at a time when the complicated machinery of our day was still inconceivable — both spinning and weaving factories have made giant strides in the last twenty years. In 1900 the existing distaffs numbered 1.879.129; in 1903 they had increased to 3.000.000; in 1907 to 3.968.700; in 1913

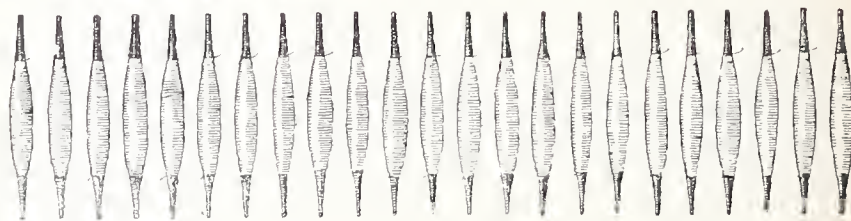
1900
1.879.129

Cotton spinning.



EXISTING DISTAFFS

1913
4.582.000



to 4.582.000. Raw cotton was imported from abroad to the extent of 1.226.895 quintals in 1900, whereas 2.018.808 quintals were imported from America, India and China in 1913.

Part of this material (about 60 %) was transformed before 1914 for national consumption, the demand being more than met by our own factories; the remainder used to be exported as spun or woven cotton to the Balkan States, Greece, the Levant, Egypt, South America and many other destinations. And Italian textile arts, through a tenacious effort of will and as a result of continuous study, are now in a condition to satisfy the taste of all classes of customers, from the richest to the poorest, and to ship all varieties of tissue obtainable from this soft vegetable fibre: from kitchen cloths to the transparent *voiles* used by fashionable women; from the peasant's cotton flannellettes to fine shirtings; from coarse soldier's trousers to the white suitings of naval officers; without mentioning all the sub-divisions of table linen, bath towellings, curtains and window-blinds, carpets, camp tents, aeroplane canvases and so forth. When mixed with silk, wool and flax, cotton still further multiplies its marvellous productivity; submitted, either spun or woven, to dyeing and printing processes, it

lends itself to multicoloured designs, such as to satisfy the most widely diverging tastes. This is precisely the secret of Italian exportation, which always studies the predilections of its foreign markets, and is always the first to arrive on the field with new designs and colour schemes, always in advance and never behind either season or fashion.

Exotic raw materials for export manufacturies.

By the side of this great industry, which imports raw material and exports valuable manufactured products, other industries of lesser importance and extent have arisen, which are equally active and just as expert in drawing the best advantage from imported material, and are founded, like the cotton factories, more on the intellectual assets of the producers themselves than on reasons of physical or territorial superiority.

Thus, we have the hat industry, which prepares its felts from rabbit fur brought from as far away as Australia, shorn, selected and dyed in France and England. It is a known fact that hats constitute one of the most characteristic specialities of Italian export trade. Made in Monza with merino, at Intra and Alessandria with Australian rabbit fur, they are sold all over the world: from Egypt to Scandinavia, from Japan to the Argentine Republic.

Another industry of the future is the making of buttons from the *corozo* of the Equator and from the Erythrean *Dum palm* in the factories of the Bergamasco, the Bresciano and the Piacentino, whence they are sent to England and other destinations.

Nor can the factories which produce fine paper from Scandinavian cellulose be passed over; the earthenware works which purchase their kaolin in England; the manufactures of rubber and elastic articles in general, which keep up their own plantations in tropical countries; all industries dedicated on a large scale to foreign trade and destined to reach a high degree of extension and development.

The “ wheel „ of industries.

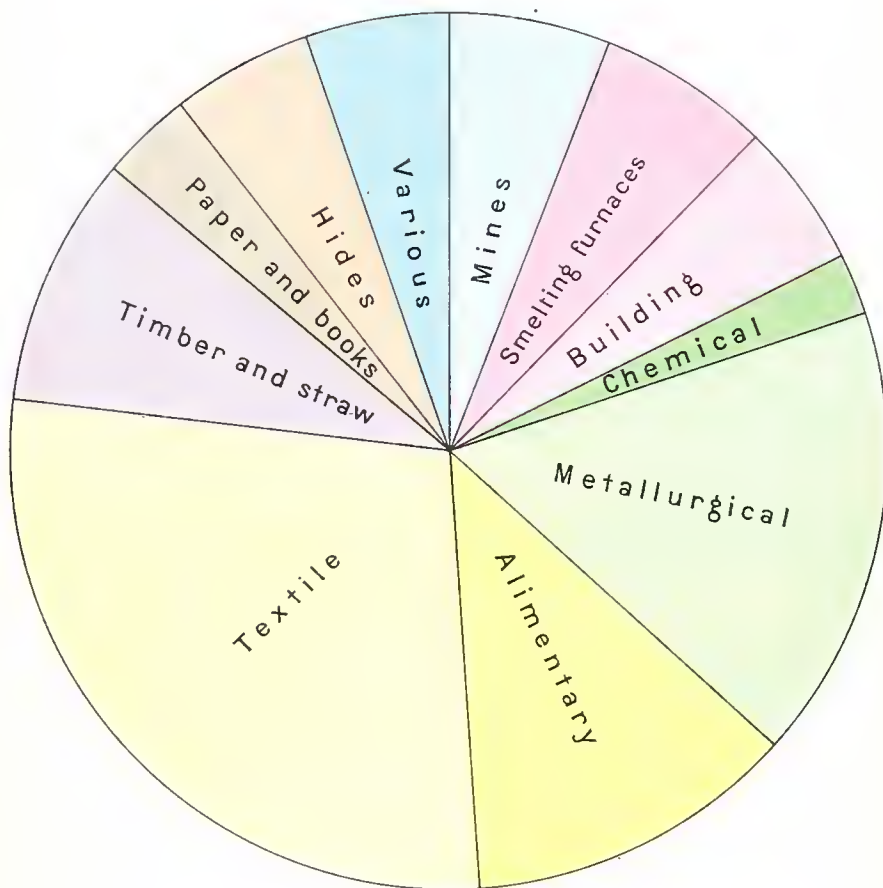
Italian industries comprise more or less in their entirety all branches of manufacturing activity. The industrial census of 1911 showed 243.926 existing factories, employing 2.304.438 workmen, thus distributed :

| C A T E G O R I E S | Number of concerns | Number of workmen employed |
|---|-----------------------|----------------------------------|
| I. <i>Mines</i> (mines proper, quarries, peat fields and accessory concerns) . | 9.134 | 140.552 |
| II. <i>Kilns</i> (bricks, earthenware, lime and cement, glass) | 7.598 | 146.044 |
| III. <i>Building</i> (house building, roads, hydraulic works) | 5.845 | 123.811 |
| IV. <i>Chemical works</i> (properly so called, medicinals, matches, explosives) | 3.001 | 50.573 |
| V. <i>Metals</i> (metallurgical, mechanical and naval works) | 39.553 | 387.447 |
| VI. <i>Alimentary</i> | 58.097 | 284.976 |
| VII. <i>Textile</i> (including dyeing, garments, laundries) | 32.174 | 646.421 |
| VIII. <i>Wood and straw</i> | 47.202 | 209.694 |
| IX. <i>Paper and books</i> | 4.579 | 78.014 |
| X. <i>Hides</i> | 29.881 | 121.077 |
| XI. <i>Various</i> | 6.862 | 115.829 |
| TOTALS | 243.926 | 2.304.438 |

The noteworthy progress of these last years is made manifest by comparing the above figures with the statistics

DIAGRAM OF INDUSTRIES

(The sectors are in proportion to the number of employed workers)





for 1903, which gave only 117,341 concerns employing 1,275,109 hands.

The profits realised are still more noteworthy, if we compare the number and power of the machinery in use at those successive dates:

| MOTORS | NUMBER | | HP | |
|---|--------|--------|---------|---------|
| | 1903 | 1911 | 1903 | 1911 |
| Hydraulic | 49.711 | 32.357 | 418.481 | 951.836 |
| Steam | 8.181 | 7.264 | 289.735 | 471.043 |
| Gas, alcohol, benzine, petrol, mineral oil, wind . . . | 2.128 | 6.573 | 26.058 | 197.525 |
| Electric | 4.049 | 61.288 | 43.816 | 586.161 |

The divergence between these figures gives some idea of the progress made in a few years, especially in the field of electrical appliances.

One interesting aspect of the industrial phenomenon is the absorption of capital by the single branches of manufacturing, commercial and banking activity. It is no error to assert that all or nearly all our great industries are formed into companies which enable them to draw capital from a hundred sources and to carry out the most daring economic enterprises.

Here is a picture of the financial status of the Italian Companies with a capital of over 500,000 lire existing on January 1st 1916:

FINANCIAL STATUS ON JANUAR 1st 1916.

| CATEGORIES | Number of Companies | Value in million lire | | | | | | |
|--|------------------------|-----------------------|--------|--|------------------|-----------------------------|---------|--------|
| | | Capital | Bonds | Reserves, amounts brought forward | Various debts | Credit and securities | Profits | Losses |
| Banks (exclusive of banks of issue) | 60 | 575.9 | — | 105.8 | 2636.3 | 3164.9 | 26.4 | 77.7 |
| Shipping | 28 | 196.1 | 44.2 | 65.6 | 128.2 | 258.4 | 49.8 | 0.9 |
| Railways and funi- culars | 64 | 651.3 | 656.7 | 40.4 | 267.2 | 311.1 | 13.8 | 3.1 |
| Tramways | 38 | 97.0 | 30.3 | 10.3 | 47.1 | 19.0 | 3.5 | 0.3 |
| Various transports | 11 | 15.5 | — | 3.4 | 7.6 | 16.7 | 1.9 | 0.4 |
| Textiles: | | | | | | | | |
| Silk | 12 | 40.0 | — | 6.3 | 19.6 | 25.4 | 5.7 | 0.1 |
| Wool | 19 | 54.6 | 5.7 | 3.2 | 67.1 | 46.5 | 10.3 | 0.1 |
| Flax and hemp | 10 | 23.7 | — | 2.0 | 23.6 | 23.5 | 3.9 | 0.1 |
| Jute | 8 | 16.3 | — | 0.6 | 7.3 | 11.1 | 6.9 | — |
| Cotton | 79 | 261.8 | 21.6 | 12.1 | 231.3 | 203.7 | 33.6 | 0.2 |
| Various | 12 | 28.1 | — | 2.8 | 13.0 | 16.6 | 8.8 | 0.1 |
| Extractives | 50 | 169.4 | 16.3 | 55.5 | 81.6 | 112.4 | 25.1 | 2.2 |
| Iron | 42 | 250.6 | 50.6 | 32.5 | 387.2 | 296.0 | 42.5 | 1.0 |
| Mechanical | 94 | 256.6 | 21.2 | 22.5 | 507.4 | 256.0 | 29.2 | 0.1 |
| Automobiles | 17 | 49.0 | — | 5.8 | 56.0 | 62.3 | 15.0 | — |
| Electric (production and distrib. of power) | 179 | 531.7 | 144.0 | 44.5 | 356.4 | 271.4 | 38.5 | 1.0 |
| Electric machinery | 17 | 36.7 | 4.0 | 3.6 | 57.6 | 51.2 | 5.4 | 2.4 |
| Rubber | 5 | 25.1 | 5.5 | 1.3 | 21.6 | 30.7 | 3.8 | — |
| Paper | 21 | 36.3 | 4.6 | 4.2 | 24.6 | 21.8 | 4.6 | — |
| Hides | 11 | 16.8 | — | 1.3 | 22.1 | 21.9 | 5.9 | 0.1 |
| Chemicals | 102 | 286.7 | 62.3 | 75.1 | 225.2 | 249.8 | 47.7 | 3.4 |
| Lime and cement | 46 | 74.7 | 5.4 | 8.3 | 30.5 | 32.6 | 3.9 | 0.4 |
| Earthenware | 10 | 22.4 | 0.8 | 1.5 | 8.8 | 8.1 | 1.0 | — |
| Glass | 11 | 16.1 | — | 0.6 | 7.5 | 6.0 | 1.0 | — |
| Alimentary | 108 | 275.0 | 0.6 | 54.7 | 127.2 | 198.2 | 42.1 | 0.8 |
| Aqueducts | 16 | 85.0 | 19.7 | 15.5 | 161.6 | 36.8 | 5.6 | 0.1 |
| Hotels, springs and theatres | 38 | 51.3 | 13.5 | 1.2 | 30.9 | 10.9 | 0.2 | 2.8 |
| Building | 16 | 45.6 | — | 0.8 | 46.3 | 40.3 | 1.2 | 7.4 |
| House property | 63 | 264.2 | 20.5 | 17.5 | 112.2 | 73.6 | 12.7 | 2.0 |
| Commercial | 23 | 33.4 | 1.3 | 2.7 | 28.8 | 36.3 | 4.1 | — |
| Italian enterprises abroad | 16 | 39.8 | — | 1.4 | 30.9 | 40.1 | 5.7 | 0.1 |
| TOTALS | 1226 | 4526.7 | 1128.8 | 603.0 | 5772.5 | 5953.9 | 459.8 | 106.8 |

Rapid evolution of iron and chemical industries.

The war, as was to be foreseen, has created a new fever of growth in many enterprises, and has produced marvellous economic and technical developments, especially in iron, mechanical and chemical concerns.

Iron and mechanical works show a tendency to integrate each other and to amalgamate into colossal organisms capable of the most varied production. An example is to be found in the *Gio. Ansaldo Company*, which has a capital of 500.000.000 lire and numbers thirty different establishments for the exploitation of mines, cast iron, bronze and steel foundries, electrometallurgy, armour plating, engine building, artillery and munition works, aviation motors, production of oxygen and hydrogen, electrotechnical works, factories for gasoline and heavy oil motors, ship-building and aircraft yards, ship rigging works, the treatment of fire-proof materials.

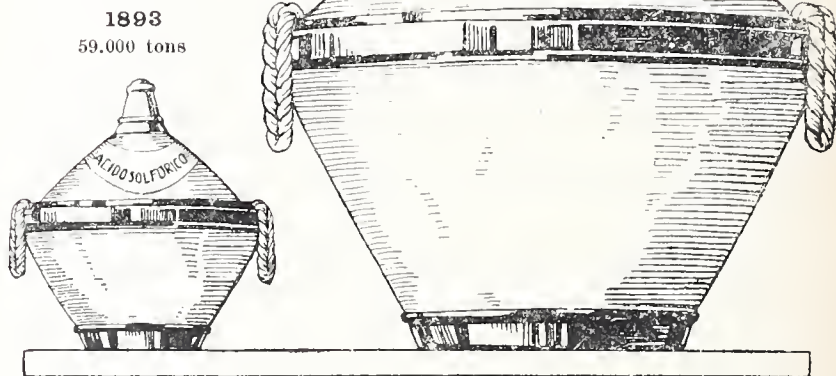
The post-war program of the « Ansaldo Company » comprises a vast plan of ship-building and maritime enterprise.

Another colossal industrial concentration is the *Ilva-Italian Smelting and Steel Works* (*Alti forni e Acciaierie d'Italia*), a company risen with a capital of 300.000.000 lire, from the amalgamation of five similar concerns, specialised in the treatment of iron, but addicted also to other types of production, principally ship-building. Metallurgic science, now admirably refined, has multiplied varieties of special types of steel and metal alloys, in their turn adapted by their intrinsic properties to the most highly perfected mechanical appliances.

Another object of pride for Italian mechanics is the *Fiat* of Turin, which builds every kind of automobile vehicle: from the pleasure car to the heavy war camion; from the artillery auto-tractor to the scout aeroplane; from the motor-boat to the submarine. The *Fiat* has a capital of 100.000.000 lire, employs over 20.000 workmen, and besides supplying the

**Production
of sulphuric acid.**

1913
644.000 tons



various needs of our army in the field, also exports much of its production for the benefit of our Allies.

Thus Italian war industries have given assistance of the first order to the belligerent armies, repairing with admirable promptitude the losses suffered during the retreat on the Piave and contributing their share to the recent victories.

Before the war, Italian chemistry was completely subordinated to German importation, which reached about 200.000.000 lire per annum. As a consequence of the closing of the German market, noteworthy initiatives have sprung up also in this field. Thus a vast soda factory (*Società Solway*) has arisen at Castiglione in Tuscany, and a new factory for the production of caustic and electrolithic soda has been started at Piedimulera in Val d'Ossola. At Cengio, gathered round the modest nucleus of the explosives works already in existence, there is an immense factory for the preparation of carbolic and various organic and explosive products. The distillation of tar has a

**Production
of beer.**

1913
652.000 hectolitres

1881
127.000 hectolitres



foothold everywhere, together with the consequent production of benzol and toluol, generators in their turn of a rich train of derivates.

Various Italian factories have started the manufacture of artificial colours, formerly imported from Germany, so that for the first time it has been possible to dye an Italian flag with Italian made red and green: a happy symbol of our effective and definite economic and political independence.

The chemical specialities which principally distinguish our production are: sulphuric acid (6.259.439 quintals in 1915), phosphates and various fertilisers (9.122.462 quintals), car-

bide of calcium (491.892), calcium cyanide (252.920), sulphate of copper (412.720), nitric acid (158.058), chloridric acid (180.590), sulphate of ammonia (146.989) and sulphate of sodium (141.474).

New investments of capital.

The giddy rise in the capital of limited companies is a promising sign of Italian economic expansion and of her rosy hopes for after the war.

The figures of these increases are shown below, taking only net investments into account, that is to say calculating decreases of capital from 1913 to 1917 inclusively :

| Year | Million lire |
|----------------|--------------|
| 1913 | 132 |
| 1914 | 116 |
| 1915 | 69 |
| 1916 | 470 |
| 1917 | 1331 |

This means that, whereas capital was discouraged at the beginning of the war, in such a way as to bring new investments in limited companies down to a low figure, it was after that inspired to take part in economic enterprises in such proportions as have never been registered before in the annals of Italian finance. This phenomenon is so accentuated as to attract the attention of the Government, which, fearing that these increases of capital might be suggested by speculative intentions, has ordained that all such increases in the case of companies with a capital of over 20.000.000 lire shall be subject to a previous ministerial authorisation.

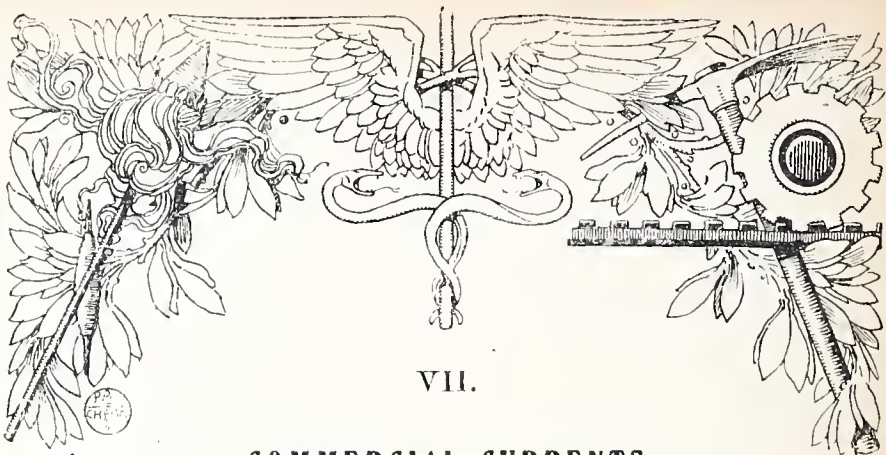
Industrial mobilisation.

It is not surprising, in the light of the preceding facts, that Italian producers should have admirably seconded the Government, in meeting the need of a colossal war production.

The Minister Dallolio said in the Chamber of Deputies, in the sitting of December 21st 1917: « What have we demanded since the day in which we created our industrial mobilisation? Let us tell the plain truth: what had we got on the eve of war? 125 State controlled factories of the most incomplete, with about 125.000 hands; factories which were much cursed and much wept over. To-day we have reached 1750 State controlled factories and over 1800 minor factories: a total, that is, of 3550 factories, and we are on the way to possessing 4000, with about 700.000 hands, of which 160.000 women and 45.000 boys. But this total result, all this formation, all this creation, is Italian creation: the Country has done. Let us then give to the Country the praise it deserves; let us give it whole-heartedly! ».

At the end of the conflict, when victory shall have been achieved, the gigantic technical apparatus, the new corporations of skilled workmen which have been created, the personal ability called forth by events, will remain like a beneficial imprint of the war in the future economic history of the Nation. The present prepares the future. A new and more conscious, more fervid activity of peaceful labour will continue the destiny of this formidable war organisation. Nor will the secret of the high and let us hope fortunate mission which the future holds in store for them escape the great captains of Italian industry.





VII.

COMMERCIAL CURRENTS

Half a century of expansion.

The increase in the population, the intensification of agricultural production, the improvement in conditions of land and sea transport, the growth of temporary and permanent emigration, the acquisition of new colonies and the multiplication of relations of all kinds between civilised peoples, could not but determine in Italy, as elsewhere, a progressive expansion of traffic with foreign countries.

In the last forty years, Italy has unfolded her agricultural and industrial economy in contact with the world, favoured by her new political liberty and independence and by her still more recent technical evolution, much as a flower opens its petals to the breath of a gentle and propitious climate.

Without setting out in full the figures for the last thirty years, we will concentrate in this brief table an exposition of certain progressive values that are so many milestones in the import and export movement:

SPECIAL FOREIGN TRADE BETWEEN 1881 AND 1913.

| Years | Imports | | Exports | | United imports and exports | | Excess of imports over exports |
|-------|-----------------------------|--------------------------------------|-----------------------------|--------------------------------------|-----------------------------|--------------------------------------|--------------------------------|
| | Total value in million lire | Average value per inhabitant in lire | Total value in million lire | Average value per inhabitant in lire | Total value in million lire | Average value per inhabitant in lire | Total value in million lire |
| 1881 | 1,240 | 43,69 | 1,165 | 41,05 | 2,405 | 84,74 | 75 |
| 1886 | 1,458 | 49,58 | 1,028 | 34,96 | 2,486 | 84,54 | 430 |
| 1891 | 1,127 | 37,00 | 877 | 28,79 | 2,004 | 65,79 | 250 |
| 1896 | 1,180 | 37,45 | 1,052 | 33,39 | 2,232 | 70,84 | 128 |
| 1901 | 1,718 | 52,81 | 1,374 | 42,23 | 3,092 | 95,04 | 344 |
| 1906 | 2,514 | 75,43 | 1,906 | 57,19 | 4,420 | 132,62 | 608 |
| 1911 | 3,389 | 97,71 | 2,204 | 63,54 | 5,593 | 161,25 | 1,185 |
| 1913 | 3,646 | 102,91 | 2,512 | 70,92 | 6,158 | 173,83 | 1,134 |

The secret of an apparent *deficit*.

From this table it will be seen:

1. That our import trade has increased about threefold, between 1881 and 1913, whereas our export trade is doubled.

2. That, comparing the total population (reckoning, that is, the average value per inhabitant), the united import and export movement was, on the eve of war, twice as considerable as it was thirty-two years before.

3. That, almost parallel to the development of imports and exports, the shrinkage between the two has increased, to the point of considerably surpassing 1,000,000,000 lire in the whole six years preceding the outbreak of the European war.

This would not, at first sight, appear favourable to the fortunes of Italian commerce. But a few remarks will be found sufficient to dispel this unflattering impression.

Some Italian typical exports from 1881 to 1913.

1881

Dry fruits
203,500 quint.

Cheeses
27,700 quint.

Raw hemp
269,000 quint.

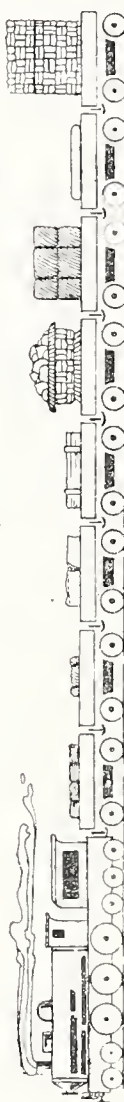
Acid fruits
130,000 tons

Wheaten «paste»
65,000 quint.

Marble 97,450 tons

Cotton tissnes
3900 quint.

Twisted silk
43,711 quint.



1913

Dry fruits
548,000 quint.

Cheeses
328,000 quint.

Raw hemp
503,000 quint.

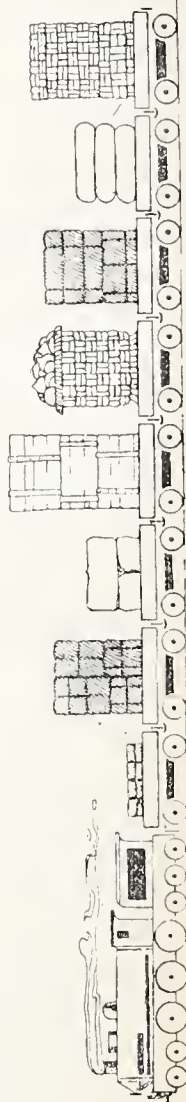
Acid fruits
440,000 tons

Wheaten «paste»
710,000 quint.

Marble 313,300 tons

Cotton tissnes
494,000 quint.

Twisted silk
73,600 quint.



Italy's foreign profits were and are still represented only in part by the profits of her export trade. The great concourse of foreigners who, especially in winter, came to Italy to visit our principal towns, or settled on the lakes or on the Ligurian Riviera, or passed through our territory on their way to Egypt or the East, also represented a considerable asset for Italian economy. The foreigners who come to Italy for the sake of health or pleasure, do not take away our money, but leave some of theirs behind. The barest approximation estimated at over 500.000.000 lire the expenses encountered by foreigners in board and lodging, trains, carriages, purchases in various shops and in a hundred other ways; 500.000.000 lire in goods and services sold to foreigners which came to be added to the profit side of Italian trade, no more and no less than if 500.000.000 lire of Italian goods had been exported.

Besides which, while many strangers came to Italy to spend money without earning it here, very many Italians went abroad to earn money without spending it, or at least spending what was strictly necessary and saving considerable sums to be spent in their native country or forwarded there. While traders and manufacturers exported goods, the workmen exported labour. Thus, a corresponding current of money to that flowing in from abroad in payment of exported goods was set up, represented by the net savings of our emigrants, sent back by drafts on national banks, or following the return from their labours of the workers themselves. This mass of earnings brought back to the mother country was estimated, up to 1909-1910, at about 500.000.000 lire, but it had certainly come nearer to 1.000.000.000 lire just before the war, in proportion to the colossal increase in emigration.

Further, the shipping rates earned by Italian ships and the interest on Italian capital invested abroad, constituted elements of profit; whereas elements of loss were the interest on foreign capital invested in Italy, the compensations paid to foreigners for intellectual or manual labour and other more or less important headings which it would be too lengthy to specify.

From an agricultural to an industrial Nation.

In the serialisation of figures which outline the development of our foreign trade, the transformation of Italy from an agricultural to an industrial economy is recognisable from various points of view.

And, indeed, not only does the importation of raw materials for industrial purposes stand revealed in a state of continual growth, but the development in this importation of raw materials is appreciably more rapid than that of the total importation.

The exportation of manufactured and semi-manufactured articles also follows a line of wider expansion than does the general export trade taken collectively, as will be seen by the following table:

| YEARS | IMPORTATION of industrial materials | | EXPORTATION of semi-manufactured articles for industrial use, and of manufactured goods | |
|-------|--|----------------------------------|--|----------------------------------|
| | Total value in million lire | Per 100 lire of total imports | Total value in million lire | Per 100 lire of total exports |
| 1881 | 592 | 47,7 | 527 | 45,2 |
| 1886 | 634 | 43,5 | 480 | 46,7 |
| 1891 | 642 | 57,0 | 471 | 53,7 |
| 1896 | 672 | 56,9 | 549 | 52,2 |
| 1901 | 1.006 | 58,6 | 817 | 59,5 |
| 1906 | 1.452 | 57,8 | 1.168 | 61,3 |
| 1911 | 1.921 | 56,7 | 1.239 | 56,2 |
| 1913 | 2.091 | 57,3 | 1.389 | 55,3 |

Germany's commercial penetration.

It is interesting, not only from the purely commercial but also from the political point of view, to follow the course of over thirty years' traffic between Italy and those countries with which she has been in direct contact.

The following table indicates these countries from left to right, beginning with those the progress of which has been most rapid, as the Argentine Republic, the German Confederation and the United States of America, and going on to those which have little increased their business intercourse with us, such as the Austro-Hungarian Monarchy, or have undergone a great decrease, such as France:

IMPORTS FROM VARIOUS COUNTRIES

(not including precious metals).

| YEARS | VALUE IN MILLION LIRE | | | | | | | |
|-------|-------------------------|--------------|------------------------|-------------|------------------|--------------|----------------------|-------------|
| | from Argentine Republic | from Germany | from the United States | from Russia | from Switzerland | from England | from Austria-Hungary | from France |
| 1881 | — | 66 | 62 | 30 | 35 | 307 | 218 | 329 |
| 1886 | — | 129 | 55 | 94 | 81 | 274 | 222 | 310 |
| 1891 | 11 | 133 | 73 | 89 | 47 | 262 | 122 | 144 |
| 1896 | 27 | 144 | 121 | 124 | 44 | 229 | 131 | 133 |
| 1901 | 38 | 205 | 234 | 150 | 57 | 279 | 178 | 179 |
| 1906 | 46 | 393 | 310 | 193 | 65 | 450 | 226 | 227 |
| 1911 | 106 | 550 | 415 | 234 | 77 | 509 | 288 | 327 |
| 1913 | 166 | 612 | 522 | 237 | 86 | 591 | 264 | 283 |

EXPORTS TO VARIOUS COUNTRIES

(not including precious metals).

| YEARS | VALUE IN MILLION LIRE | | | | | | | |
|-------|-----------------------|------------|------------------|------------|-----------|----------------|--------------------|-----------|
| | to Argentine Republic | to Germany | to United States | to England | to Russia | to Switzerland | to Austria-Hungary | to Franco |
| 1881 | — | 67 | 57 | 82 | 27 | 134 | 150 | 524 |
| 1886 | — | 107 | 52 | 71 | 18 | 88 | 98 | 440 |
| 1891 | 24 | 131 | 73 | 115 | 13 | 149 | 92 | 149 |
| 1896 | 57 | 159 | 86 | 109 | 12 | 170 | 121 | 153 |
| 1901 | 63 | 235 | 139 | 151 | 12 | 204 | 130 | 174 |
| 1906 | 137 | 251 | 240 | 132 | 10 | 365 | 139 | 212 |
| 1911 | 166 | 301 | 247 | 222 | 50 | 203 | 184 | 206 |
| 1913 | 185 | 343 | 267 | 260 | 60 | 249 | 221 | 231 |

The imports from the Argentine Republic represented in 1913 about fifteen times the value of the 1891 imports; but this, in proportion of two thirds is due to the great quantities of cereals, and of one third to the wool, fresh meat, raw hides, fats, wood for dyeing and tanning brought from that rich overseas country. The same applies to the United States, which used to ship to Italy, before the war, about 500.000.000 lire worth of goods, of which one half consisted in raw cottons and the other half in cereals, oils, metals and coal. Very few manufactured articles were sent us. Russia used to ship wheat and petrol, whereas industrial imports from that country were negligible. Neither did England contribute much to our imports: the doubling in the value of which is entirely due to the coal shipped to Genoa, Venice and Naples, representing as it does a good 60 % of all shipments from Great Britain.



SPECIAL TRADE WITH CERTAIN COUNTRIES

IMPORTS

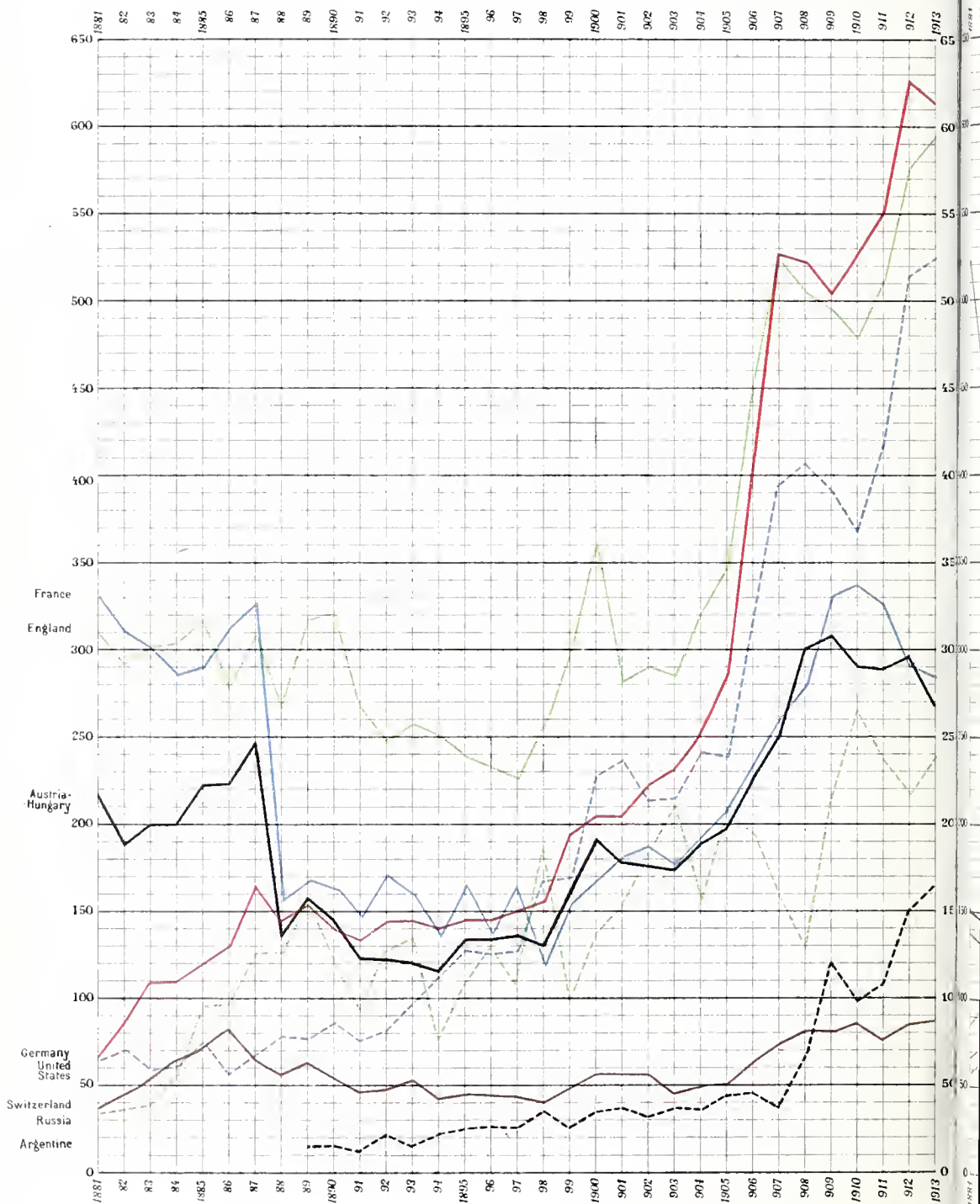
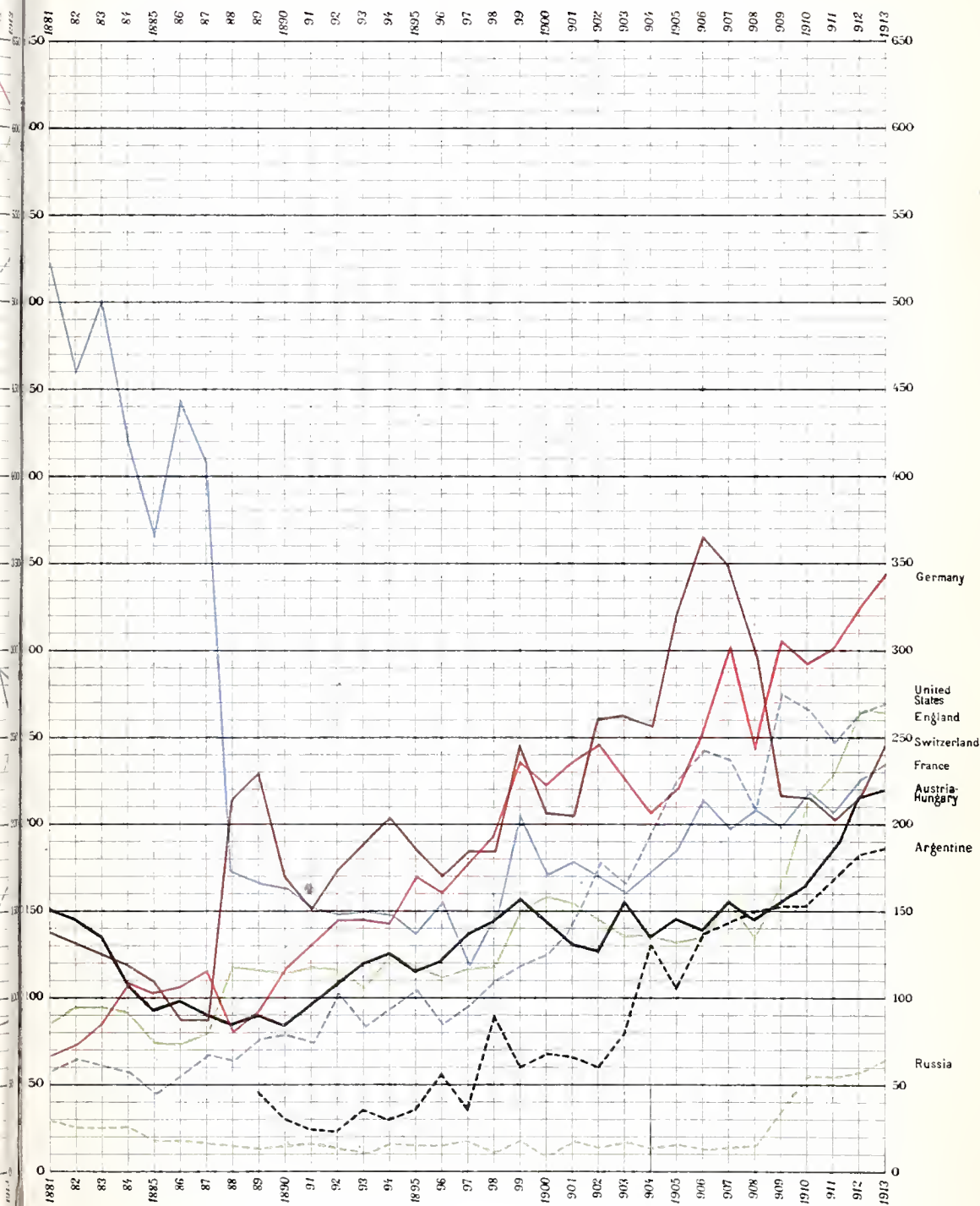


TABLE X.

RIES BETWEEN 1881 AND 1913

EXPORTS



Germany is the only country which has been able to carry out a formidable and systematic commercial penetration of our territory, as indeed throughout the rest of the world. The ten-fold increase of German imports into Italy after thirty years represents a real conquest for every branch of German industry: from manufactured woollens to machines of every kind; from chemicals to rubber articles; from dyes to scientific instruments; from cottons to silks; from electric wires to musical instruments. By taking advantage of the new trans-alpine means of communication, through the Saint Gothard, the Simplon and the Loetschberg; by moderating her railway tariffs; by perfecting her commercial and banking organisation; by letting loose her commercial travellers in every direction; by rendering competition acute between national industries and the rival industries of other countries through her system of underselling; by ably exploiting her political relations as an ally; by stipulating commercial conventions formed as means of penetration; by taking advantage, in short, of every possible economic, political and moral expedient, Germany had succeeded in assuring to herself an absolute predominance in the field of commercial relations with Italy, to the gradual exclusion of other countries which, like France, had entertained intimate and varied relations with us until a few years previously.

The primary axe of Germany's Italian commercial policy was in fact the often stipulated treaty of commerce, which was renewed in December 1904. The treaties with Austria-Hungary and Switzerland acted as a complement to this treaty, but their commercial effects were far from being comparable to those determined by the Italo-Germanic convention, as may be seen by the figures set forth above and by the attached diagrams.

By her agreement with the German Empire, Italy facilitated the entry of numerous articles manufactured in Germany, and these created a formidable and often disastrous competition with her own rising industries: while facilities were granted for shipping our characteristic agricultural

products, from which, as Germany produced few or none of the same kind, her own agriculture had little to fear.

It is anyhow self-evident that the beneficial effects of the last treaty, and also of those that preceded it, were far more deeply felt by Germany than by Italy. And, indeed, the value of the goods supplied by Italy to Germany increased five times only in the years between 1881 and 1913, while the value of the goods shipped by Germany to Italy increased ten times in the same period. From 1905 to 1913 German imports into Italy rose about 110 %, while Italian exportation into Germany rose, during the same period, only 55 %.

The parallel speaks for itself. The German Empire, in exploiting the treaty of alliance with the new Kingdom of Italy, showed the same thirst for gain which her sister nation Austria had shown in exploiting the old Reign of Lombardy and Venetia.

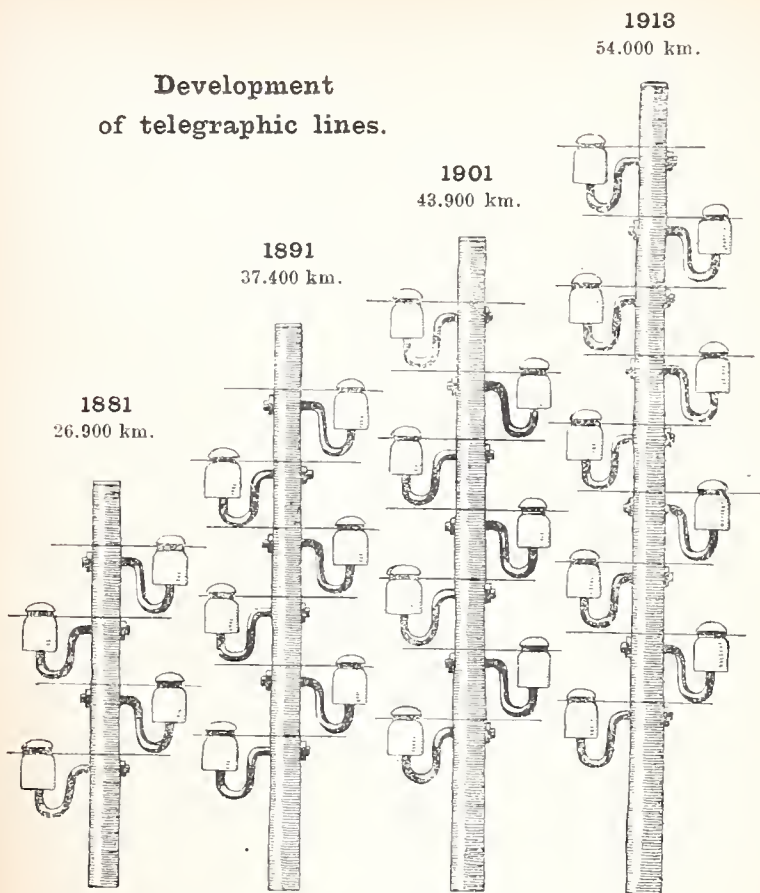
The future of Italian trade.

In future, we shall have to alter our route. The Conference which took place in Paris in June 1916 has already made clear the necessity of creating closer economic links with our Allies; and new relations are in process of formation, as evidenced by the commercial conventions arrived at between France, England and Italy with a view to facilitating and regulating mutual imports.

Ample development should principally be given to the commercial exchanges between France and Italy, so as to ensure that permanent collaboration between the two Nations which their affinity of race, soil and climate demands, thus prolonging far beyond the war that magnificent brotherhood of arms cemented by the blood they have both shed on a hundred battle-fields.

Our imports from France, which in 1898 had sunk to barely 116.000.000 lire, i. e. to less than a third of the figures for 1881, are slowly but decidedly rising, and have almost

Development of telegraphic lines.



resumed their old importance. On the other hand, our exports, which had rushed down suddenly from about 500.000.000 lire to less than 150.000.000 owing to the suspension of the Franco-Italian commercial relations in 1887, have never recovered. Spanish competition has hindered the sale of our agricultural produce; high customs duties have put a barrier against the exportation of our most important silk goods.

Far-reaching modifications will have to take place in our whole system of commercial relations after the war, and even should France fail to recover the first place in our exchanges which she occupied forty years ago, she will undoubtedly offer

us, together with England, a new and far more ample outlet of exchange than that on which we shall no longer be able to rely on the enemy market.

Imports and exports during the war.

As a matter of fact, on the conclusion of peace, Italy, as much and perhaps more than the other belligerent Nations, will feel the urgent necessity of exporting a truly enormous mass of products in order to recover her commercial and financial balance compromised by the war.

In order to give an idea of this upheaval, here are the rough totals of our imports and exports in the years between 1914 and 1917:

| YEARS | MILLION LIRE | | |
|--------|--------------|-----------|-----------|
| | Imports | Exports | Shrinkage |
| 1914 | 2.923 | 2.210 | 713 |
| 1915 | 4.703 | 2.533 | 2.170 |
| 1916 | 8.390 | 3.088 | 5.302 |
| 1917 | 11.398 (*) | 2.937 (*) | 8.461 |
| TOTALS | 27.414 | 10.768 | 16.646 |

It will be seen from this table that the Italian commercial deficit, no longer compensated by large remittances from emi-

(*) These two figures are obtained by applying an increase of 50 % to the temporary valuation (according to 1916 prices) of the imports, which is equal to 7732 millions; and an increase of 30 % to the temporary valuation of the exports, which is equal to 2258 millions.

grants and by the profits of visitors to this country, already amounted, at the end of 1917, to 16.500.000.000 lire, represented by State debts and private withdrawals of funds from England and the United States. Over and above this exposure, which can be read in foreign trade statistics, Italy has had another grievous burden to bear: before and after joining in the conflict, she found herself forced to redeem a considerable number of Italian shares, bonds and securities which were in Austrian and German hands. Whereas England and France, who owned a wealth of capital invested abroad, were able to meet the enormous financial exigencies of the war by selling the foreign securities in their possession, we were forced on the contrary to increase our financial discomfort and our passive differences by repurchasing Italian capital from Germans, in order to free ourselves from subjection to the enemy. This is an element which has not been sufficiently taken into consideration in valuing the subjective cost of Italian participation in the world conflict.

In order to re-establish our equilibrium in the balance of international payments, we cannot, and ought not, to hand back the capital invested here into foreign hands, nor empty the country of our brave soldiers once more become labourers and workmen, nor allow them to wander about the world in search of bread. The absolute necessity is making itself felt of stimulating export trade to its maximum capacity, keeping it for many years above the level of the import trade. This new impulse towards expansion should be assisted by a State policy, through transport facilities, through the repayment of customs duties on those foreign raw materials handled in the country and re-exported as manufactured articles and through the facilitation of credit.

The Minister On. Nitti, in a recent speech before the « Association of Italian Limited Companies », mentioned the proposal of constituting a great export Bank which would have the object of facilitating our traffic with foreign countries in every way, particularly by means of financial support.

Trade and shipping.

But there is more to be said.

In 1913 the trade shipping totals were represented by the following figures: tonnage of incoming goods: 23.000.000, of which 13.000.000 from foreign and 10.000.000 from Italian ships; tonnage of outgoing goods: 8.000.000, of which 2.000.000 from foreign and 6.000.000 from Italian ships.

Two important facts transpire from these gross totals:

1. That the greater part of the maritime import movement and a considerable part of the export movement took place under foreign flags (in order of importance: English, Greek, Austro-Hungarian, German, Norwegian).

2. That the tonnage engaged in bringing goods to Italy, used to make the return journey empty, in a proportion of nearly two-thirds.

These considerations inevitably compel us to meditate on the necessity of imparting the most energetic impulse possible to ship-building after the war, it being obvious that our exports will have a better chance of finding new roads and new outlets in so far as they shall be entrusted to ships flying the national flag.

The 931 steamers and the 4696 sailing ships possessed by Italy in 1913, with a collective holding capacity of 995.000 tons, would never suffice to lend support to a really vigorous and efficient mercantile policy, even after compensating the losses inflicted by submarines.

This is, for Italy, a truly formidable post-war problem.

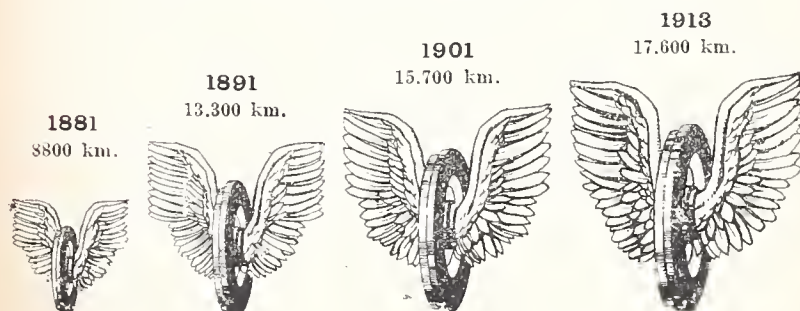
But the second point under consideration, that is, the enormous divergence between the weight of incoming and outgoing goods, to the disadvantage of the latter, induces us to consider whether it would not be wise to fill up this enormous void by granting exceedingly low rates to certain categories of exportable goods. In this way, while the tonnage that

returns to-day as ballast would find a way of earning rates which however low, would always be preferable to no profit at all, an efficacious premium would be placed in other ways on our export trade.

International railway movement.

The same problem is apparent from the results of the railway movement. In the financial working for 1913-1914, the year which immediately preceded the outbreak of war, the sum of our foreign imports by rail reached the total weight of

Development of our railway system.

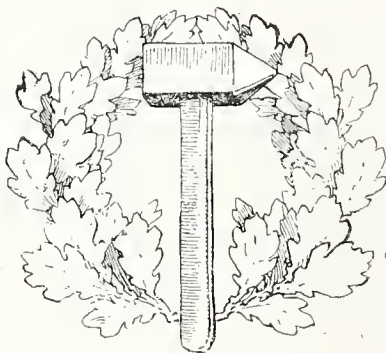


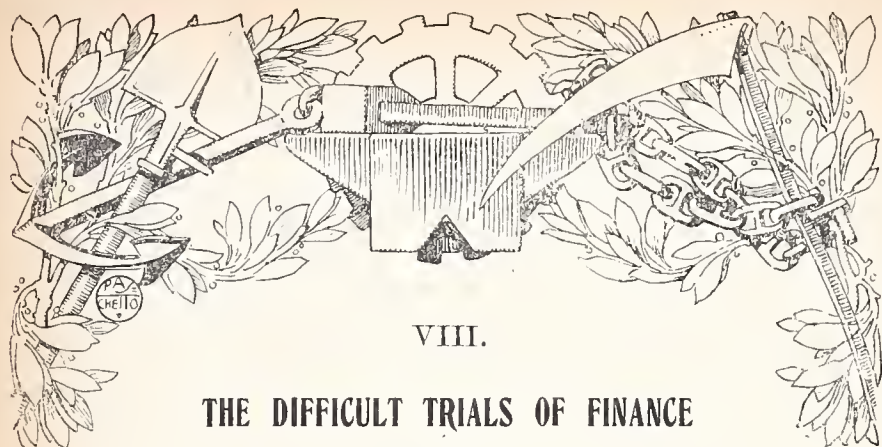
2.259.000 tons, while our exports by land were limited to 592.000 tons (little more than a quarter of the weight of our imports).

A railway tariff policy that should aim at ensuring a load for these empty returning trains, with the lowest of rates for exported goods, would benefit the railway budget as well as the expansion of trade beyond our frontiers.

Certainly we may not nourish the delusion that the enormous disproportion in weight between imports and exports can be rectified, given that Italy sells none of those heavy goods such as coal, cotton, wheat, fertilisers which constitute the greater part of our supplies from abroad.

Our industrial as well as our agricultural export trade is made up either of industrial specialities of a certain value, or of relatively costly and but slightly cumbersome natural products. Notwithstanding this irremediable disproportion, a wide enough margin still exists for the development of all our exports by special transport facilities, thus effectively contributing to the restoration of our interrupted commercial relations, and to the wiping out of the debts contracted with the allied Nations for the purpose of bearing the burden of war.





VIII.

THE DIFFICULT TRIALS OF FINANCE

A budget in process of development.

If Italy has been able to throw all she possessed and all her hopes into the great furnace of war with firm courage and a stout heart, this is certainly due to the vigorous financial structure of the State, tempered by tradition to endure the severest trials.

It may be well to bestow a fleeting glance at the vicissitudes of the Italian budget between 1860 and 1870, when the Government, at the head of a new State improvised among wars and revolutions, was obliged to face installation and reconstruction expenses caused at one and the same time by military, political and administrative needs and by the new civil and social necessities thrust upon it by the pressure of the world's economic evolution. Those were the years in which balance sheets closed with a shortage oscillating between 300.000.000 and 800.000.000 lire, when the Director General of the Treasury never knew in the morning how he was going to meet the day's expenditure, always at his wits' end to place a few Treasury Bonds at 10 per cent. Notwithstanding this evident penury, that great statesman Quintino Sella was not

afraid of replying to those inconsiderate persons who offered him money on the security of the national Customs that Italy was without doubt short of money, but that she was ready to accept any sacrifice rather than give up the smallest part of the sovereignty she had so gloriously conquered from her oppressors and from her own self.

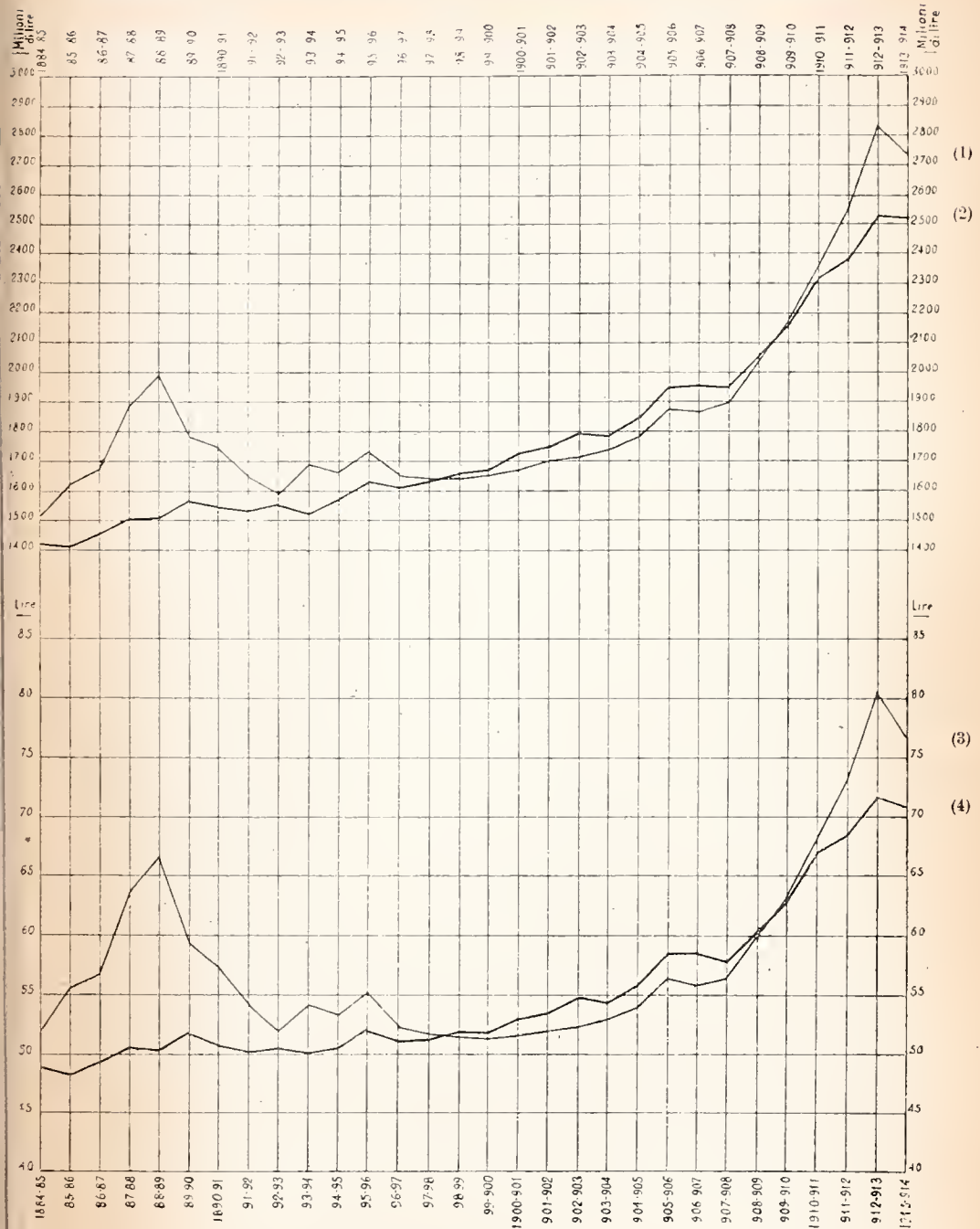
Fortune favoured the just pride of the Nation and her rulers, for about 1880 her budget re-adjusted itself. After going through a storm between 1887 and 1897, the revenue resolutely exceeded expenditure, thanks to a rigid policy of economy which, if it cost the taxpayer many a sacrifice, served to give solidity to our credit and robustness to the constitution of our public finance.

That receipts have been in constant increase since 1896, and that expenses were kept below income almost up to the beginning of the Lybian war, may be seen from the following table :

| Financial years | REVENUE | | EXPENDITURE | |
|-----------------|--------------------------|--------------------------------------|--------------------------|--------------------------------------|
| | Total in million lire | Average per inhabitant in lire | Total in million lire | Average per inhabitant in lire |
| 1896-1897 | 1.616 | 51,12 | 1.652 | 52,26 |
| 1897-1898 | 1.630 | 51,22 | 1.641 | 51,57 |
| 1898-1899 | 1.659 | 51,79 | 1.645 | 51,35 |
| 1899-1900 | 1.672 | 51,86 | 1.654 | 51,30 |
| 1900-1901 | 1.721 | 53,04 | 1.671 | 51,50 |
| 1901-1902 | 1.744 | 53,47 | 1.697 | 52,03 |
| 1902-1903 | 1.795 | 54,75 | 1.713 | 52,25 |
| 1903-1904 | 1.786 | 54,29 | 1.740 | 52,90 |
| 1904-1905 | 1.843 | 55,62 | 1.780 | 53,71 |
| 1905-1906 | 1.946 | 58,53 | 1.875 | 56,39 |
| 1906-1907 | 1.955 | 58,53 | 1.863 | 55,78 |
| 1907-1908 | 1.946 | 57,87 | 1.894 | 56,32 |
| 1908-1909 | 2.050 | 60,39 | 2.023 | 59,59 |
| 1909-1910 | 2.152 | 62,91 | 2.163 | 63,23 |
| 1910-1911 | 2.316 | 67,04 | 2.351 | 68,05 |
| 1911-1912 | 2.386 | 68,54 | 2.545 | 73,10 |
| 1912-1913 | 2.529 | 71,77 | 2.836 | 80,48 |
| 1913-1914 | 2.524 | 70,90 | 2.738 | 76,91 |

TABLE XI.

Development of public finance from 1884-1885 to 1913-1914.



penditure. — (2) Revenue. — (3) Average expenditure per inhabitant. — (4) Average income per inhabitant.

The figures contained in the table on pag. 82 bear witness to a development in the State budget, both on the credit and the debt side, far more rapid than the natural increase in population.

This progress is particularly evident in some sources of revenue, the results of which are ever a faithful reflection of the taxpayer's welfare. Thus, the tax on buildings, which yielded barely 88.000.000 lire in the year 1896-1897, brought in 113.000.000 in 1913-1914; and the same process of development has been followed in the respective fiscal revenue accounted for by income tax (from 288 to 346.000.000 lire), tax on business concerns (from 199 to 294.000.000), tax on railway profits (from 19 to 43.000.000), building tax (from 45 to 230.000.000), customs and duties (from 234 to 343.000.000), tobacco monopoly (from 188 to 350.000.000), salt monopoly (from 73 to 90.000.000), postal, telegraph and telephone profits (from 66.500.000 to 170.400.000 lire).

Government provision.

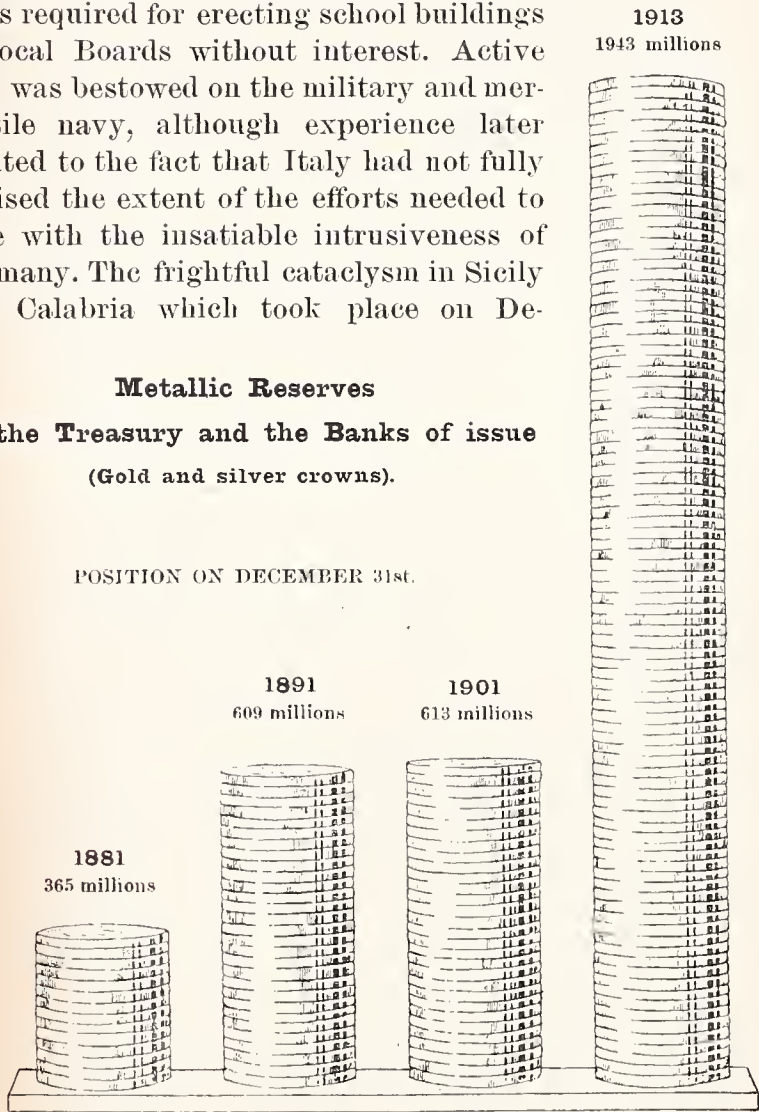
The budget of the youthful State was truly formed as to its bone structure, and the various functions of national economy proceeded with such regularity and balance as to make the conversion possible of 10.000.000.000 lire from 4 per cent to 3 $\frac{1}{2}$ per cent from one day to the other. Not only the public budget, but the commercial scale too levelled itself at that time and even rose above par; all exchange in foreign currencies had disappeared and our paper money was accepted in business transactions in preference to gold.

Nor did the increase in revenue signify for the taxpayer a burden without compensations. The Governments of that period provided for much useful expenditure, strengthening State administration through the creation of new organisms, undertaking the building of new roads and railways, developing telegraph and telephone systems, encouraging the institution of itinerant chairs of agriculture in each province of the realm, causing the Chamber to vote Accident Insurance

laws, laws on weekly closing, on woman and child labour, preparing wide programs of social reform and, lastly, promulgating special laws in favour of the Southern Provinces and the islands, which, more than other regions, required State assistance. The organisation for elementary education needed urgent reform, and the State loaned the sums required for erecting school buildings to local Boards without interest. Active care was bestowed on the military and mercantile navy, although experience later pointed to the fact that Italy had not fully realised the extent of the efforts needed to cope with the insatiable intrusiveness of Germany. The frightful cataclysm in Sicily and Calabria which took place on De-

Metallic Reserves
at the Treasury and the Banks of issue
 (Gold and silver crowns).

POSITION ON DECEMBER 31st.



cember 28th 1908 and the no less ghastly disaster at Avezzano (January 13th 1915) were the cause of fresh public expenditure on a large scale; although the Nation, moved by a unanimous impulse of fraternal charity, proved itself even more generous than the Exchequer, and showed itself capable on those occasions of bearing with undaunted fortitude the pitiless blows of a blind fate.

Nor should we omit to mention the burdens rendered inevitable by the expenses incurred in the conquest of Lybia.

War finance.

In order to appreciate at its true value the sum total of economic and moral sacrifices voluntarily made by Italy in bringing her contribution to the World War, we must consider that at the outbreak of the European conflagration this country had not yet completely recovered from — nor had, indeed, completely finished — the Lybian war, which cost from 2.000.000.000 to 3.000.000.000 lire and the best blood of Italian youth.

Nevertheless, the pulse of the Italians did not quiver on entering, all banners unfurled, into this new and far more formidable war, the magnitude of which stood revealed by ten months of battles.

The great effort in men and munitions undertaken by Italy at that moment could not be disassociated from an equivalent financial effort, which was accomplished in accordance with a strenuous rule of conduct and with the firm determination to bring the war to a victorious issue regardless of cost.

In this too the singular spirit of sacrifice and the power of adaptation of the Italian citizen stand revealed. The language of figures is very clear. In spite of the military reverses which overtook us at the end of 1917 and brought about among other effects the cessation of all income from certain provinces, the total revenue for the financial year July 1st 1917 to

June 30th 1918 amounted to 4.160.000.000 lire, i. e. 895.000.000 above the total for the preceding year. Thus, intensified taxation during the three years of the war has created an increase of 2.300.000.000 lire on the figures of 1914-1915, which were 1.850.000.000 lire. This increase of 2.300.000.000 lire exactly represents the sum required to pay the interest at 5 per cent on a capital of 46.000.000.000 lire.

And if this speaks for the sobriety, discipline and self-sacrifice of the taxpayer, it also bears witness to the wisdom of the measures taken and to the well-balanced calculations of our financiers.

The effort of a non-wealthy Country.

Italy, up to June 30th 1918, had spent precisely 46.000.000.000 lire on the war. To say that her budget allowed her to pay the interest on this debt of 46.000.000.000 lire is the same as affirming that Italian citizens had already faced the discipline of remitting in rates and taxes, as much as was needed to meet the new obligations incurred by the State, while the corresponding expenditure was being faced. It also means that the Government has not contracted a single debt for the war without at the same time taking the proper steps for securing the payment of interest.

Thus, Italy has been able to provide for the burdens of war, which, starting from the period of her neutrality, have gone on increasing with progressive intensity until they have reached 50.000.000 lire per day about three years after the intervention. In 1917 alone a round sum of 20.000.000.000 lire was expended; which means that 6.000.000.000 lire more were spent than the 14.000.000.000 which represented the total earnings of the population in time of peace.

Nor is this enough. Besides willingly submitting to the increased burden of taxation which we have indicated, the Italians have responded with religious devotion and sense of

discipline to every Government appeal for subscriptions to the various war loans.

And the results have been ever more considerable:

| | Millions |
|---|---------------|
| First national war Loan $4\frac{1}{2}$ % (January 1915) | 1.000 |
| Second » » » » (July 1915) | 1.126 |
| Third » » » 5 % (January 1916) | 3.018 |
| Fourth » » » » (January 1917) | 3.798 |
| Fifth » » » » (January 1918) | 6.130 |
| TOTAL | 15.072 |

To these loans, represented by Consols or State bonds, must be added those negotiated through the sale of Treasury Bonds of varying issues and duration, falling due at varying dates, which amounted in all to about 11.000.000.000 lire on May 31st 1918.

These continual contributions to the State in no way interfered with the accumulation of savings in banks. We have already seen the important development of industrial investments within the last two years. The increase in savings deposits since the beginning of the war has been no less imposing. These, which were only 2.800.000.000 lire in June 1914, had become 3.500.000.000 at the end of 1917.

Nor were the generous impulses of public charity in any way blunted. When the public was called upon to contribute to the civil relief Committees operating in all the principal centres, to institutions for war invalids and cripples and for the relief of war refugees, and to the Red Cross, all classes of citizens have given millions upon millions, without measure. And when an appeal was made for the collection of gold from private safes and jewel-cases, Italian men and women from every province vied with each other in sending to the Treasury medals, gold pieces, watches, trinkets, rings, necklaces, earrings, bracelets, pendants with which to feed the State's metal reserves, much as the Romans did during the Punic wars.

Paper-money Circulation

(Million Italian lire).

End December 1917.

End June 1914.



2576

ITALY

10.164



6105

FRANCE

22.533



AUSTRIA



2443

37.000

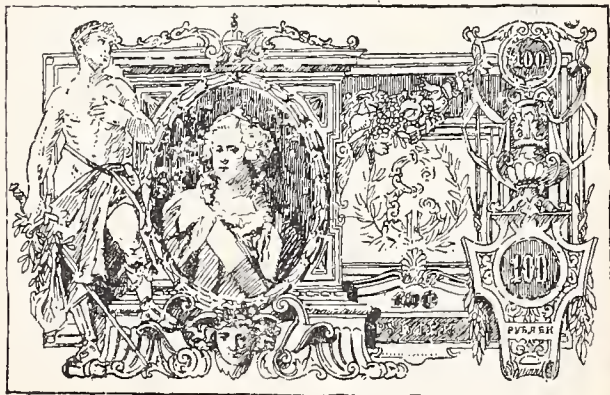


RUSSIA



411

46.309



These are facts and figures which may appear of less consequence to a superficial observer and are therefore less significant than those which express the financial effort made by the other belligerent States of the Entente. Nevertheless, if we consider them carefully in relation to the anterior economic and financial power of France and England, they compel us to recognise that Italy's effort is equal if not superior to that of her Allies. The wealth of Italy before the war was valued at 90.000.000.000 francs; the wealth of France at 285.000.000.000; the wealth of England at 450.000.000.000. Italy had a yearly income of 14.000.000.000 lire; whereas France earned 32.000.000.000 and England 56.000.000.000. France and England had many thousands of millions invested in Government or industrial securities abroad; Italy, on the other hand, had a great mass of foreign capital invested within her own gates.

Lastly, let us consider the enormous burden borne by Italy in consequence of the exchange rates, which have grown relentlessly harsher from the beginning of the European conflict, in such a way as to out-distance by a long way the losses suffered by the French franc.

This low valuation of the lira is the effect of the want of equilibrium to which we have already alluded between imports and exports — a want of equilibrium which obliges Italy to pay out a great deal more than she receives; and it is at the same time a consequence of the vast amount of money in circulation: although the 10.164.000.000 in bank notes issued up to January 1st 1918 (which were only 2.782.000.000 on January 1st 1914) are still far below the 22.000.000.000 issued by France at the same date, or the 21.000.000.000 issued by Germany and the 37.000.000.000 issued by Austria-Hungary.

However that may be, the diminished buying power of our currency has notably increased the cost of our foreign purchases, and remains one of the most singular aspects presented by the comforting phenomenon of this country's resistance.

A glance at the future.

When Italy, having « passed from the abyss to the shore », shall look back to measure the extent of the trials she has overcome, she cannot fail to experience a certain complacency at having faced and carried through an effort so much greater than her economic potentiality. But looking back will not mean rest for her. Ever surpassing herself, as in the successive phases of this titanic war, the Nation will need to gather up and direct her energies towards a new program of civil, social and economic life, illumined by the light of victory and vivified by the blood of renewed youth.

The vast problems of reconstruction and preservation of equilibrium will point out the path she must tread in order to heal her war-inflicted wounds and to take part in the front rank in the renewed ascent of the civilised world towards its higher destinies.

In these dramatic surroundings the returned soldier, tempered by fire and steel, exalted by a long and superhuman struggle against adverse elements, will be the true hero and protagonist of the new history of the Italian people.

Agriculture will flourish once more at his hands, flocks will increase and multiply; manufactures, answering to the rhythm of peaceful activities, will tread new ways, illumined by flashes of genius produced through the shock of war.

It will be one great renewed fervour of industrious work, a fever of land and sea traffic, a multiple competition of fruitful exchanges between friendly nations of both hemispheres.

There will be no failure in Italy of the energies needful to give her the mastery of her destiny, which awaits her beyond Victory.







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